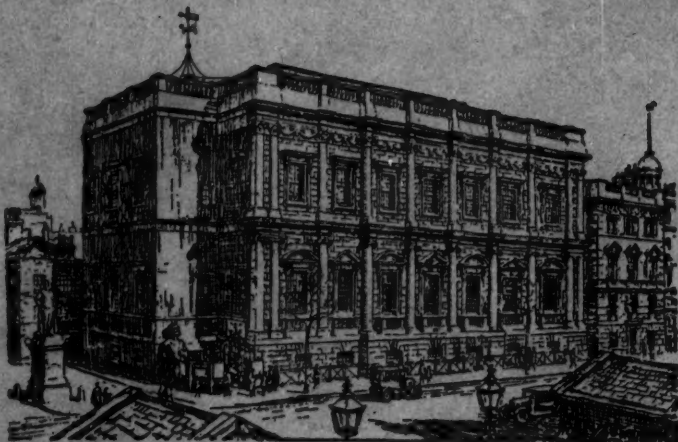


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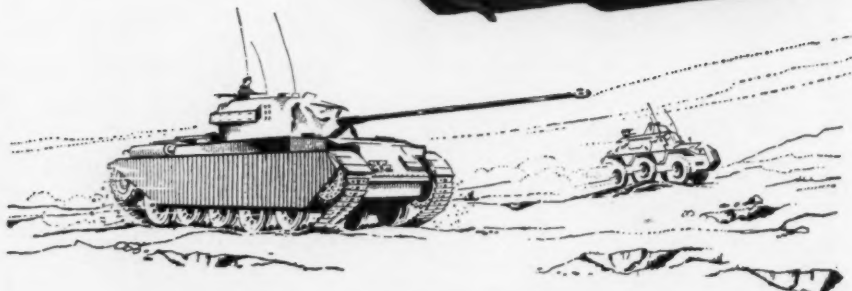
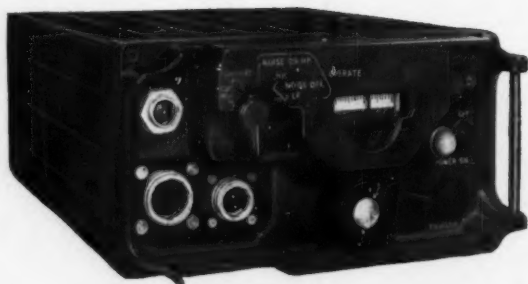
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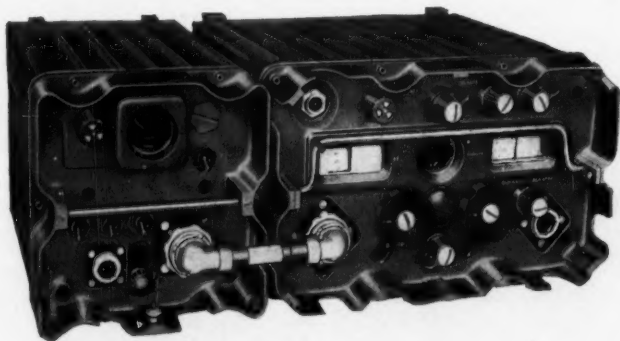
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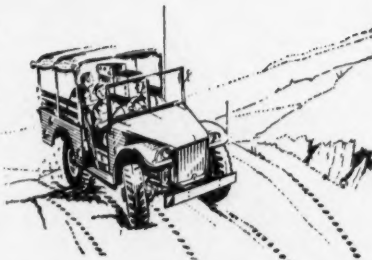
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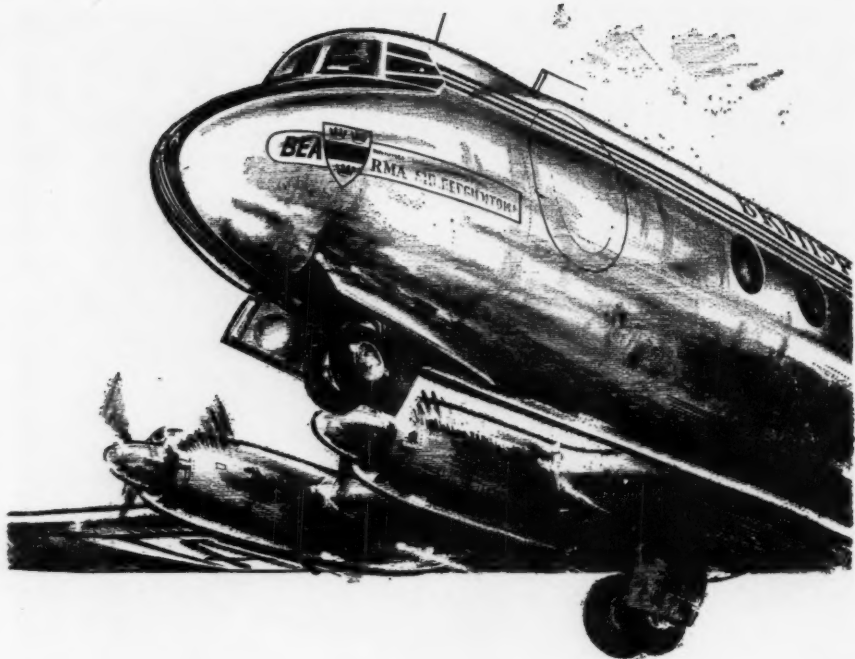
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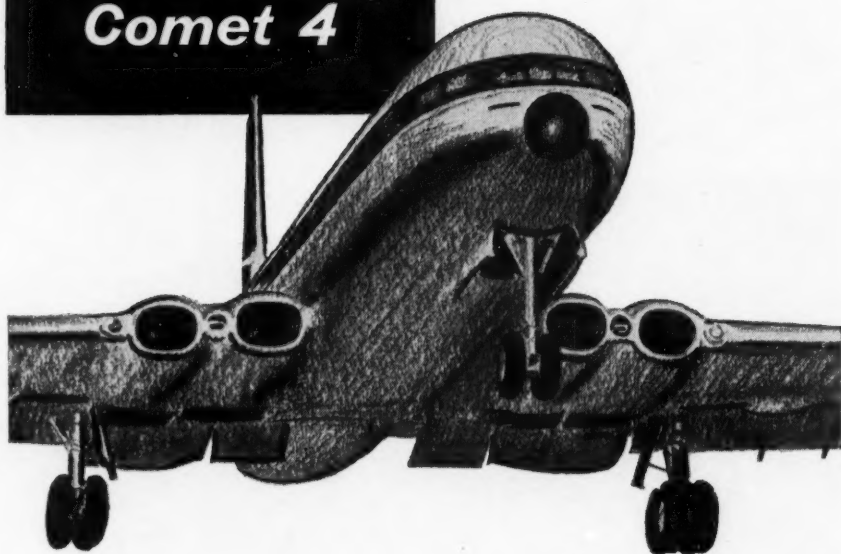
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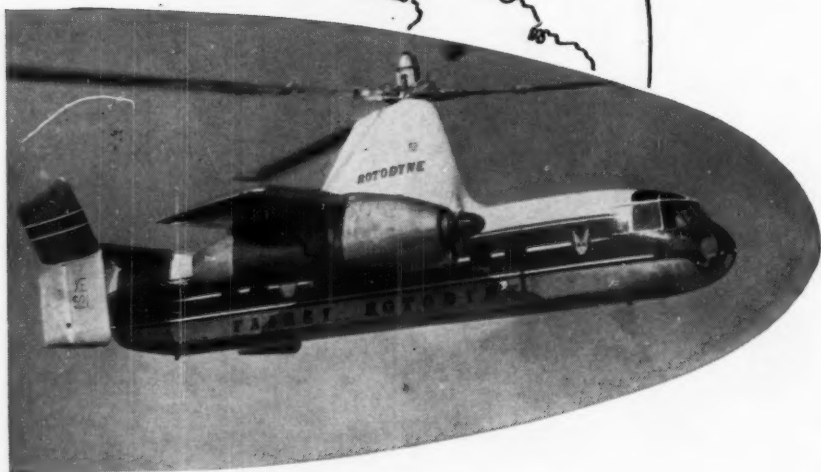
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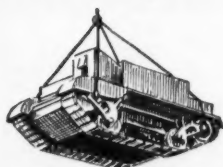
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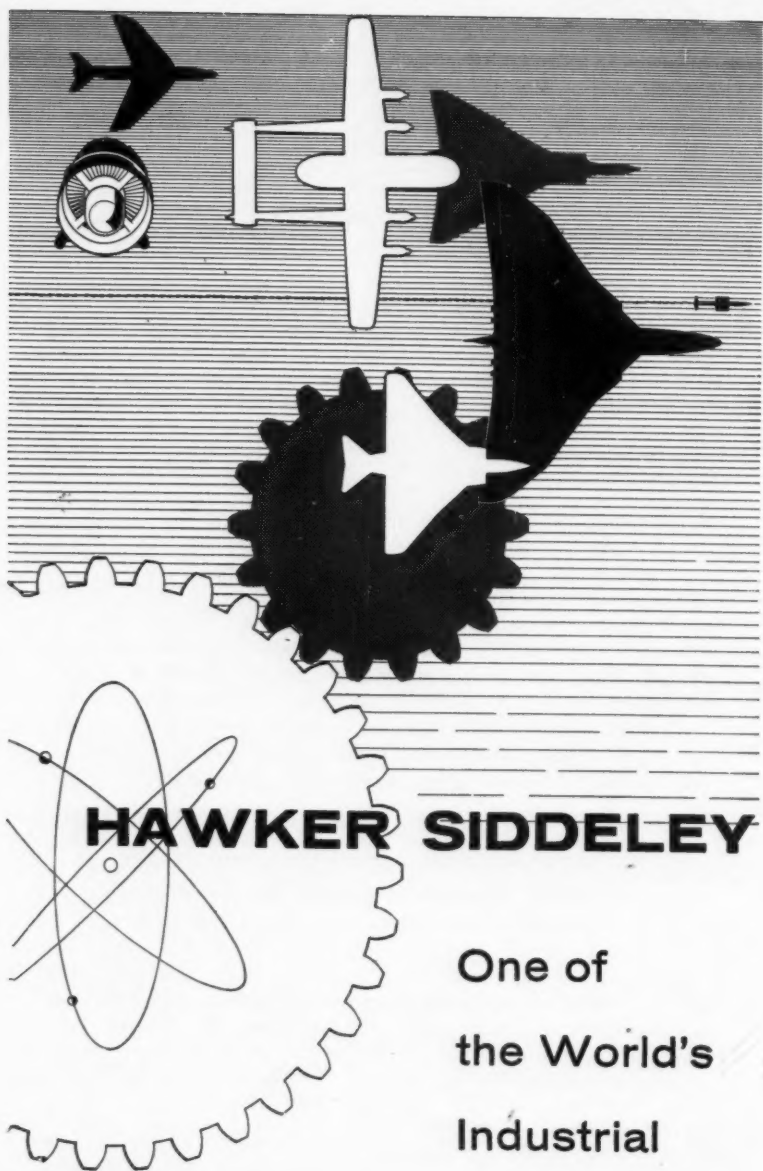
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Commissioned officers on the active and retired lists of all H.M. Services, including those of the Dominions and Colonies, also midshipmen of the Royal and Dominion Navies, the R.N.R., R.N.V.R., and R.N.V.S.R. are eligible for membership without formality.

Retired officers of the Regular and Auxiliary forces, including the Home Guard, whose names no longer appear in the official lists, are eligible for membership by ballot.

Ladies whose names appear or have appeared in the official lists as serving or having served as officers in any of the three Services are eligible as above.

Naval, military, and air force cadets at the Service colleges are eligible on the recommendation of their commanding officers.

Officers' messes are not eligible for membership, but may subscribe to the JOURNAL.

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The rates of subscription are :—

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Annual subscription	1	10	0
Life subscription	24	0	0
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Full particulars of membership with alternative forms for bankers' orders can be obtained on application to the Secretary, Royal United Service Institution, Whitehall, S.W.1.

The JOURNAL is published in February, May, August, and November. Copies may be purchased by non-members, price 10s. od. each (10s. 6d. by post), or £2 yearly (£2 2s. od. by post). Orders should be sent to the Secretary, Royal United Service Institution, Whitehall, S.W.1.

MUSEUM

The R.U.S. Museum is open daily from 10 a.m. to 5 p.m., except on Sundays, Christmas Day, and Good Friday. Members may obtain free passes for their friends on application to the Secretary.

Members of the Services in uniform are admitted free.

SECRETARY'S NOTES

February, 1959

ANNIVERSARY MEETING

The Anniversary Meeting will be held at 3 p.m. on Tuesday, 10th March, 1959. The Council will present their Annual Report and Accounts, and there will be an election to fill vacancies on the Council. Copies of the Annual Report and Accounts for 1958 can be obtained on application to the Secretary.

COUNCIL

Ex Officio Members

Marshal of the Royal Air Force Sir William F. Dickson, G.C.B., K.B.E., D.S.O., A.F.C., Chief of the Defence Staff, has accepted the invitation of the Council to become an ex officio Member.

Rear-Admiral the Earl Cairns has accepted the invitation of the Council to become an ex officio Member on taking up the appointment of President of the Royal Naval College, Greenwich.

NEW MEMBERS

The following officers joined the Institution between 11th October, 1958, and 7th January, 1959 :—

NAVY

- *Lieutenant-Commander I. M. Stoop, D.S.C., R.N.
- Commander D. P. N. Carroll, R.N.
- *Lieutenant-Commander M. Davenport, R.N.V.R.
- Captain W. A. de L. G. Solbé, R.M. (Retd.).
- Commander R. F. Park, R.N.
- Commander R. S. Forrest, R.N.
- Commander H. J. A. S. Jerome, D.S.O., R.N. (Retd.).
- Lieutenant A. Eaglestone, R.N.
- Commander J. C. Goosen, S.A.N.
- Lieutenant W. J. Robinson, R.N.V.R.
- Commander T. D. Brougham, R.N. (Retd.).

ARMY

- *Major A. F. Leslie, M.B.E., Royal Engineers.
- Captain L. W. Prescott, Royal Signals.
- Captain E. P. H. Coles, Royal Engineers.
- *Major H. F. Hartley, Royal Engineers.
- Lieutenant A. J. E. Lloyd, Royal Artillery, T.A.
- *Officer Cadet H. T. G. Powell.
- Captain J. A. Taffs, The Royal Berkshire Regiment.
- Captain F. I. A. Ferguson, Scots Guards.
- *Captain D. W. Anderson, The Highland Light Infantry.
- Colonel D. A. Du Toit, D.F.C., South African Staff Corps (Air).
- Captain W. F. C. Robertson, The Duke of Wellington's Regiment.
- Captain O. R. Tweedy, The Black Watch.
- Captain J. B. Akehurst, The Northamptonshire Regiment.
- Captain J. E. Hollingshead, The Devonshire and Dorset Regiment.
- Captain A. E. Carter, The Wiltshire Regiment.
- Captain F. J. H. Grant, late Royal Artillery.
- Captain R. E. Kendrick, R.A.S.C.
- *Major R. B. Marriott, The Royal Fusiliers.
- Captain S. H. Gurney, Royal Artillery.
- Captain M. G. Farmer, Royal Tank Regiment.

* Life member.

SECRETARY'S NOTES

Captain R. N. Harris, R.A.S.C.
 Captain J. D. A. Fitzgerald, The Royal Norfolk Regiment.
 Captain N. Bilderbeck, Royal Artillery.
 Captain T. R. Jones, Royal Horse Artillery.
 Major J. P. O'H. Pollock, M.B.E., Irish Guards.
 Lieutenant A. Black, Royal Artillery.
 Captain J. R. Edward-Collins, The Devonshire and Dorset Regiment.
 *Captain B. M. Lees, The King's Own Yorkshire Light Infantry.
 Captain K. J. Leyser, The Black Watch, T.A.
 Captain R. Sheather, The Devonshire and Dorset Regiment.
 Captain D. P. Molloy, The King's Regiment.
 Major the Hon. Alastair F. Buchan, late 14th Canadian Hussars.
 Captain T. P. E. Curry, late Royal Artillery.
 *Major J. D. Slim, The Argyll and Sutherland Highlanders.
 Captain G. A. Chisholm, R.A.O.C., A.E.R.
 *Major R. F. Stretch, R.A.O.C.
 *Captain J. M. P. Walker, The Black Watch.
 Major R. B. Owen, The North Staffordshire Regiment.
 Captain R. K. L. Bowley, R.A.S.C.
 Captain C. Hay, The South Staffordshire Regiment.
 Captain G. C. Wynne, late The King's Own Yorkshire Light Infantry.
 Captain A. M. Pyne, Royal Engineers.
 Major J. A. C. Bird, The Loyal Regiment.
 2nd Lieutenant D. S. Strong, R.A.O.C., A.E.R.
 Captain A. S. Rooke, R.A.O.C.
 Major-General A. C. Shortt, C.B., O.B.E.
 Captain J. N. Kelly, M.C., 7th Gurkha Rifles.
 Captain K. S. B. Wintle, Royal Artillery.
 Captain J. O. P. Kirk, 17th/21st Lancers.
 Captain M. B. Noble, 1st The Royal Dragoons.
 Captain A. R. Timme, R.A.S.C.
 Captain J. J. L. Thorpe, The Parachute Regiment.
 Captain R. Lovatt, Royal Artillery.
 Lieutenant M. J. Smith, The Queen's Own Royal West Kent Regiment.
 Captain I. K. Campbell, South African Army.
 Captain D. E. Trappes-Lomax, Scots Guards.

AIR FORCE

*Squadron Leader R. L. Dunkley, R.A.F.
 Air Commodore E. D. M. Nelson, C.B.
 Flight Lieutenant R. A. Brown, R.A.F.
 Squadron Leader N. L. Pramanik, I.A.F.
 *Squadron Leader J. Moffett, M.B.E., R.A.F.
 Flight Lieutenant G. J. McPhail, R.A.F.
 Flight Lieutenant S. J. West, R.A.F.
 *Squadron Leader J. M. B. Edwards, R.A.F.
 *Wing Commander K. M. Ahmed, P.A.F.
 Flying Officer D. S. Barker, R.A.F.
 *Flight Lieutenant R. M. Gammon, R.A.F.
 Flight Lieutenant A. C. Gunn, R.A.F.
 Pilot Officer H. R. Ploszek, R.A.F.
 Flight Lieutenant D. K. MacLachlan, R.A.F. (Retd.).
 Squadron Leader H. Kitchen, R.A.F.

* Life member.

Flight Lieutenant M. De Burgh, R.A.F.
 Flight Lieutenant G. J. Thwaites, M.B.E., R.A.F. Regiment.
 Flight Lieutenant C. F. P. Thompson, R.A.F.
 Flight Lieutenant D. A. V. Clark, R.A.F.
 Wing Commander T. A. J. Stocker, M.B.E., R.A.F.
 Squadron Leader G. R. Moore, R.A.F.
 Flight Lieutenant J. L. Cowan, R.A.F.
 Squadron Leader H. J. Granger, R.A.F.

PRIZE MEMBERSHIP

Pilot Officer R. W. G. Adams, R.A.F., has been awarded five years' free membership of the Institution.

LIAISON OFFICERS

With the object of making the facilities afforded by membership of the Institution better known to the Services, the Council have invited the principal Commands at home and overseas to nominate Liaison Officers.

It is hoped that the Liaison Officers will be able to suggest, from time to time, ways in which the Institution can be of greater value to the serving officer. Liaison Officers are provided with particulars of the Institution and forms to enable them to enrol members without further formality.

The following is a list of officers who have been nominated as Liaison Officers, and the Commands or Establishments they represent :—

<i>Establishment or Command</i>	<i>Name</i>
Amphibious Warfare Headquarters	Lieut.-Colonel J. C. d'E. Coke, D.S.C., R.M.
Joint Services Staff College ...	Major P. E. C. Tuckey, M.B.E.
British Joint Services Mission, Washington	Major R. E. Philips, M.C.

ROYAL NAVY

Home Fleet	Commander R. D. Henderson, R.N.
Flag Officer Air (Home)	Lieut.-Commander M. L. Y. Ainsworth, R.N.
Flag Officer, Scotland	Commander G. B. L. Smith, R.N.
H.M.S. <i>Excellent</i>	Commander R. J. L. Hammond, R.N.
H.M.S. <i>Dryad</i>	Lieut.-Commander A. E. Fanning, D.S.C., R.N.
H.M.S. <i>Vernon</i>	Lieut.-Commander M. L. Stacey, R.N.
Reserve Fleet	Instructor Lieut.-Commander W. E. J. Golding, R.N.
Devonport	Commander L. E. S. H. Le Bailly, R.N., H.M.S. <i>Thunderer</i> .
Portsmouth	Lieut.-Commander R. W. Garner, R.N., R.N. Barracks.
Portsmouth Group, R.M.	Lieutenant F. C. Darwall, R.M.
Plymouth Group, R.M.	Captain H. S. S. Poyntz, R.M.

ARMY

Eastern Command	Lieut.-Colonel I. R. Ferguson Innes.
Northern Command	Colonel G. S. Fillingham, M.C.
Northern Ireland District	Major A. O. Shipley.
Scottish Command	Lieut.-Colonel G. L. Auret, O.B.E.
Southern Command	Lieut.-Colonel H. A. Styles.
Western Command	Major M. R. C. Brightman.
Far East Land Forces	Major G. E. M. Slater.
B.A.O.R.	Lieut.-Colonel J. C. Woollett, C.B.E., M.C.
Staff College, Camberley	Lieut.-Colonel F. W. Young, M.B.E.

ROYAL AIR FORCE

Bomber Command ...	...	Group Captain J. H. Searby, D.S.O., D.F.C.
Fighter Command ...	...	Squadron Leader R. D. Sheardown, O.B.E.
Coastal Command ...	...	Group Captain J. R. Armitstead, D.F.C.
Flying Training Command	...	Wing Commander D. F. Dixon.
Technical Training Command	...	Squadron Leader A. F. Carvosso.
Transport Command ...	...	Wing Commander R. P. S. Wyrill.
Maintenance Command ...	...	Wing Commander N. E. Hext, M.B.E.
Home Command ...	...	Squadron Leader R. W. James, D.F.C.
Far East Air Force...	...	Wing Commander E. C. Badcoe, D.F.C.
Second Tactical Air Force...	...	Group Captain G. A. V. Clayton, D.F.C.
Signals Command ...	...	Wing Commander F. G. Carroll.

GOLD MEDAL AND TRENCH GASCOIGNE PRIZE ESSAY
COMPETITION, 1958

The following entries were received :

- "Fortuna juvat audaces."
- "Cautusque Vigilans."
- "Per angusta ad augusta."
- "Nemo me impune lacessit."
- "Defence is not enough"—Doggerello.
- "Suaviter in modo, fortiter in re."
- "Pax Britannica."
- "Let them hate so long as they fear."
- "May the pendulum swing."
- "Si vis pacem, para bellum."
- "Of mice and men."
- "Cucumber."
- "Mea gloria fides."
- "Pericles."
- "Pro dilectis moriar."
- "Je conduis."

GOLD MEDAL AND TRENCH GASCOIGNE PRIZE ESSAY
COMPETITION, 1959

Particulars of the current competition will be found in the leaflet in this JOURNAL.

MUSEUM
ADDITIONS

A model of a naval 4.7-inch anti-aircraft gun, 1918 (9754): Given by Mrs. G. F. Adam-Downe.

A wall-piece model of the bow of H.M.S. *Centurion*, 64 guns, c. 1737 (9755). Given by L. G. Rayden, Esq.

A water-colour painting of King Edward VII presenting Guidons and Colours to the units of the Territorial Force at Windsor, 1908 (9756). Given by Lieutenant-Commander T. J. Offer, R.N.V.R.

JOURNAL

Offers of suitable contributions to the JOURNAL are invited. Confidential matter cannot be used, but there is ample scope for professional articles which contain useful lessons of recent wars; also contributions of a general Service character, such as strategic principles, command and leadership, morale, staff work, and naval, military, and air force history, customs, and traditions.

The Editor is authorized to receive articles from serving officers, and, if found suitable, to seek permission for their publication from the appropriate Service Department.

Army officers are reminded that such articles must be accompanied by the written approval of the author's commanding officer.

LECTURE

With reference to Part II of the lecture programme issued with the JOURNAL for November, 1958, Sir Vivian Fuchs has been able to accept the Council's invitation to lecture at the Institution on "The Antarctic Expedition, 1957-58," and this will take place on Thursday, 19th March next, at 3 p.m.

As his talk will be profusely illustrated, only the main floor of the lecture theatre will provide suitable viewing places, and in view of the certain popularity of this lecture it has been decided to issue tickets and to hold a ballot. A member may also apply for a ticket for one guest, who must be an adult member of his family. Applications, accompanied by an "out of pocket" charge of 1s. in stamps for single or double tickets together with a stamped addressed return envelope, must be received at the Institution by Wednesday, 11th March. Tickets for successful applicants will be posted on 12th March. Those who are unsuccessful in the ballot will have their stamps returned and are asked to accept this as an indication of regret that their application was not successful in the ballot. *No applications can be accepted by telephone.* It is essential that the return envelope is sent with the application as it will be used as a ticket in the ballot. These arrangements have been made solely in the interests of members in order to avoid fruitless journeys.



DONKEY PATROL
THE ROYAL HORSE GUARDS ON OPERATIONS IN CYPRUS

THE JOURNAL

of the

Royal United Service Institution

Vol. CIV

FEBRUARY, 1959

No. 613

EDITOR'S NOTES

IN these notes in the November issue of this JOURNAL, tribute was paid to Field-Marshal Montgomery, drawing attention to some of his brilliant qualities. Some of my remarks may have given the impression that the 8th Army, when it came under General Montgomery's command in August, was a defeated army.

In fairness to Field-Marshal Sir Claude Auchinleck and the officers and men who fought with the 8th Army before General Montgomery's arrival, I must quote Field-Marshal Alexander's Dispatch of 23rd May, 1947, which states that, "in July the initiative had passed to the 8th Army and three attacks on various parts of the line had caused the enemy to disperse his forces and gained us time to improve our defences." During these operations the 8th Army captured 10,000 prisoners in addition to inflicting heavy losses on the enemy in men and materiel.

It was certainly not my intention in any way to belittle the part played by the 8th Army under Field-Marshal Sir Claude Auchinleck, and it is regretted if this impression was inadvertently conveyed by my Notes in the November issue of this JOURNAL.

* * *

Field-Marshal Montgomery's lecture, as expected, drew a large number of members to the Institution on 24th October last, and few can have thought their journey really unnecessary. He gave us, as he was certain to do, a most stimulating talk, and what is much more to the point, identified himself with a point of view which has been gaining ground among many thinkers in the strategical sphere, though perhaps he did not pursue all his ideas to their final conclusion.

Western thought, and to a large extent particularly American thought, has progressed a long way since the barren philosophy of 'massive retaliation' put its brake on the logical development of strategic appreciation. Its bankruptcy as a philosophy of deterrent war was quickly revealed in Indo-China, yet the continuing lip-service to its efficacy still has a deadening effect on the evolution of a more realistic defence policy for the West. It is against this heavy blanket of nuclear threat that the growing weight of enlightened military thought has to struggle, for there are still many who find in this 'massive retaliation' theory a comfortable umbrella under which to shelter without the need of exerting themselves to think for the future.

In the meantime, as though blinded by the mushroom clouds of this imagined safety, the real war, the war which is being fought today, is being lost. The Field-Marshal put his finger on the spot when he pointed to the lack of unity among the

A

nations of the West, a lack which cuts deeply into our defensive strength in more ways than one. It reaches its first absurdity in the virtually complete lack of agreement in the provision of standard weapons for the Western countries, which one might have thought to be one of the most obvious and valuable products of a true alliance. Instead of this, each of the countries of the Western alliance with any manufacturing capability churns out its own weapons regardless of what may be the best Western weapon, as opposed to the best national weapon. National pride (though it is called pig-headedness when referring to other countries) and the economic power of the big manufacturing concerns are powerful barriers to international sanity in this matter of an integrated Western weapons system.

This, however, is only one of the first fruits of the lack of true unity. It cuts much deeper where the question of an agreed international strategy is concerned. There is, probably inescapably, a rigidity of view which is not entirely due to the massive retaliation theory, but is caused in part through the unequal contributions to the totality of Western defence. The biggest contributors have the biggest say, and what they say is not always in the best interests of a fully international strategy for our times. Too often the smaller voices have been drowned by the louder tones of the more opulent of the partners.

It cuts deeper still in the lack of any coherent Western policy in the political and economic fields, both of which have now far outstripped the military in importance. We talk to the uncommitted countries of the world, now far and away the most important countries in the battle against Communism, with a veritable babel of voices that, in sum total, assuredly does the West more harm than good. We cut across each other's policies, we outbid each other in an attempt to secure some temporary national advantage, and because of this we more often outrage than not those very nations we most need as friends.

The great problem of the moment, as Field-Marshal Montgomery so forcefully pointed out, is to achieve a real international unity of the West. We need such a unity not only militarily, but politically, and economically as well, and we need it quickly and badly. How are we to achieve it?

For all the lip service paid, in this country alone, to inter-Service co-operation, we have not really achieved even that among ourselves. I am tempted to quote an earlier lecture by Field-Marshal Montgomery in which he reckoned that he could command a fleet at sea, to which the distinguished soldier in the Chair remarked that he would eat his hat before he would let an admiral command his army. Maybe it is not so fanciful a thought as it may sound. Colonels Blake and Monck made a pretty good fist of commanding the English fleet in the Dutch wars, and Admiral Vernon did not do so badly in handling the land forces at Porto Bello in 1739. Be that as it may, the memoirs of several distinguished soldiers which have recently appeared are pretty revealing of some of the stresses and strains among the Chiefs of Staff during the last war. If we are strictly honest with ourselves, we have to admit that the inter-Service co-operation wore a little bit thin at times even in that august body.

Oddly enough, the closer understanding and co-operation came lower down in the Service scale, in the various combined headquarters and, more often still, in an *ad hoc* association on the field of battle. This tempts one to wonder whether unity is not best achieved from the bottom up, rather than from the top down. Rigidity of thought is a natural corollary of age, and the inter-Service Staff Colleges have not yet been going long enough to make their influence truly felt among the 'top brass.'

if one may use a modern vulgarism. Yet in the quest for international unity, is not national unity the first *sine qua non*? If we could learn to talk in N.A.T.O. with one voice, a voice of obvious sincerity and belief, might not its influence spread? Maybe the Services of the other N.A.T.O. nations would catch the infection and themselves speak with one voice. And if N.A.T.O. itself could speak with one voice, even politicians and economists might be equally infected.

Attempts to unify from the top, if indeed any such attempts have honestly been made, are obvious failures. We would be dishonest with ourselves if we tried to believe otherwise. If one method demonstrably fails, then obviously we have to try another. One other way is to sow the seed at the bottom and train it to grow upwards. We must teach our young officers that their own particular Service is but one part of the whole, we must educate them to think inter-Service, to live inter-Service, above all, to believe inter-Service. If we can get that across, with real honesty and sincerity, if we can make it fundamental to the whole of their Service thought, then indeed the gates of true unity will open.

* * *

We offer a warm welcome to the new Institute for Strategic Studies, which was founded at the end of last year. It is difficult for the layman to form an intelligent opinion about defence policy generally, largely due to inadequate information on the subject. Too often in the past 50 years has a single weapon or technical development—the *Dreadnought*, the tank, the bomber, the hydrogen bomb—been accepted by public opinion as the answer to all our strategic problems. Yet as Western defence policy becomes more and more complex, and the technical factors which affect it become harder for the non-expert to understand, so an increasingly wide range of thinking people find themselves in need of an informed background against which to understand and discuss the assumptions on which it is based. It has seemed increasingly desirable in recent years that, at the heart of a nation which is still a great military power, the centre of the Commonwealth, and one of the principal partners in N.A.T.O., there should exist some focus for discussion of the great contemporary problems of defence and disarmament, and a means of harnessing to the problems of the future the wealth of experience that is available outside Whitehall.

The Institute has the following broad terms of reference:—

- (a) To study the effect of developments both in weapons and international relations upon strategy and upon Western defence and disarmament policy;
- (b) to provide a centre for the discussion of these problems; and
- (c) to provide a reference centre which will enable students of defence and strategy to keep abreast of important trends of opinion and of policy not only in the West but in the Soviet bloc and in the uncommitted nations as well.

It is not concerned solely with British policy or problems, and its membership will not be limited to British subjects. Nor will it function as a pressure group or mouthpiece for a dogmatic school of thought. Its practical objectives are:—

- (1) To initiate one or two studies a year, by specially constituted groups, in fields either where a fresh appraisal of accepted ideas is called for, or where new ground has yet to be broken. During 1959 these will be "Mobility" and "The implications of interdependence among the Western allies."
- (2) To initiate a number of informal meetings and lectures.

- (3) To launch a new publication, probably of six issues a year, consisting primarily of reprints or condensations of important statements and articles that have appeared throughout the world, including the Soviet Union.
- (4) To build up a library, complementary to the library of the R.U.S.I. and to the press library of Chatham House, consisting of books and articles dealing with all aspects of defence in the nuclear age.

The first Director of the Institute is Alastair Buchan, formerly Assistant Editor of *The Economist* and later Defence and Diplomatic Correspondent of *The Observer*. The Assistant Director and Secretary is Commander H. E. B. Jenkinson, R.N. (Retd.). The premises of the Institute are at 18, Adam Street, London, W.C.2. The Secretary will gladly send details of the terms of membership to those who are interested in this new venture.

* * *

We would like to call attention to the announcement in the Secretary's Notes concerning the lecture to be given in the Institution on 19th March, 1959, by Sir Vivian Fuchs on his crossing of Antarctica.

* * *

In the discussion following Field-Marshal Montgomery's lecture on 24th October, a question was asked by Captain E. U. Raikes. In the November issue of the JOURNAL the question appeared as having been asked by Mr. G. T. Raikes. We regret any inconvenience which may have been caused.

THE IMPACT OF REDUCTIONS OF DEFENCE REQUIREMENTS ON BRITISH INDUSTRY

By MR. A. A. SHENFIELD

On Wednesday, 26th March, 1958, at 3 p.m.

ADMIRAL OF THE FLEET SIR ARTHUR POWER, G.C.B., G.B.E., C.V.O., in the Chair

THE CHAIRMAN: I feel that it is appropriate when, to borrow a word from the other side of the Atlantic, there is a recession in the defence Services, that we should have expert opinion on how that recession is going to affect industrial life. That is the reason why your Council invited our guest today.

From the size of the audience, it may be that the Council was not wise in its selection of the subject, but I should like to assure our guest that what he says will be by no means confined to this audience. It goes out to a very large number of serving officers and ex-serving officers both at home and also in the Dominions.

Our policy in arranging these lectures is to get the best possible people to speak to us on a variety of subjects. We have not been disappointed. I think that we are very fortunate today to have to talk to us on this frightfully important subject the Economic Adviser to the Federation of British Industries, and we welcome, not only in this room but also to the pages of our *Journal*, Mr. Shenfield.

LECTURE

IT is customary for economists, when they engage in crystal-gazing enterprises, to begin by saying how impossible their task is, then to go on to perform it, and finally to say that of course what they have said may or may not be right but is the best they can do. I propose to follow the custom. The economist has at least this consolation in tackling crystal-gazing exercises, that though he may well turn out to be wrong, he will be wrong in a sophisticated way, whereas the layman is not only more likely to be wrong but also will be wrong in a naïve way.

In accordance with this custom, I must begin by saying that this afternoon you really have given me an impossibly difficult assignment. I have to discuss the effect of the defence cuts, or the reshaped defence programme, on British industry. Clearly there are at least two great questions here, the answers to which cannot be provided with any certainty.

First, there is the state of the British economy and its progress during the period of the new defence programme. Of course it is always difficult to assess the state of the British or any other economy, but it is especially difficult at the moment because it is possible that we are now standing over the watershed between a long, sustained period of inflation and a new period of something like deflation. It is possible, but not certain; and hence this year may be as critical a year as any that we have had since the War as far as the judgment of the future is concerned.

Secondly, little more than a vague sketch is available of the new defence programme itself. The White Papers of 1957 and 1958 do set out some figures, notably for manpower, for 1962, but otherwise they are concerned for the most part, when they do come down to facts and figures, with the estimates of cost in 1957-58 and 1958-59; and in any case, the full impact of the changes in defence production on the industries producing defence requirements is as yet much too difficult for those industries themselves accurately to assess. With those observations I have discharged the first part of the economist's duty and told you how impossible the job is. Still, I will go ahead and have a crack at it.

Let us first look at the magnitude and character of the British economy, and then consider that part of it which consists of the defence industries and the Defence Services themselves.

The British economy has a labour force of about 23,000,000 people and provides sustenance for 51,000,000 people. It produces a net national income which is probably at this moment running at about £17,000,000,000 per annum. The last firm figure was for 1956, when it was rather more than £16,000,000,000. Although it has not risen much in 1957—in fact it has risen less than it has done in recent years—nevertheless it is probable that in 1958 the figure will be something like £17,000,000,000, which works out at about £340 per head per annum.

This is one of the highest national incomes in the whole of the world. Amongst the great economies of the world it is, in fact, second. The American national income is, of course, very much greater in money terms; it is close on £1,000 per head per annum. Of course the real income which is represented by the dollar equivalent of £1,000 per annum is less than the real equivalent of £1,000 per annum in Britain. Hence the real income per head in America is not three times that in Britain, as the figures would suggest. There are other countries which have a higher income per head than Britain, namely, Canada, Australia, New Zealand, Switzerland, Sweden, and even Belgium—who is a short head in front of Britain—but they are all small. However, though the West German national income per head is between 85 and 90 per cent. of ours, the current rate of expansion of the West German economy would, if sustained, probably bring it up to the British level in two or three years' time.

In order to live, the British economy needs to export more than any other major economy in the world, except for that of Western Germany which is in much the same position. At the same time it must sustain an immense defence burden.

The magnitude of this burden is displayed by one or two simple figures. In 1958–59, projected defence expenditure will be a little more than £1,400,000,000, which is about 8 per cent. of our net national income. The American defence expenditure in the fiscal year 1958 will probably be at least 11 times ours, and perhaps 12 times. This means that, per head, the Americans will bear more than we shall, even allowing for their greater capacity to do so in money terms. As the American population is rather more than three times ours and their national income per head is not quite three times, an equivalent burden might perhaps be represented by an expenditure of a little less than 10 times ours. I think that it is important that we in Britain should know this and that we should salute the great contribution of the Americans to the cost of the defence of the free world. Yet by comparison with that of others, apart from the Americans, our defence burden is exceedingly large; and it has been in the recent past even larger relatively to that of others.

The West German current expenditure on defence, for example, though very much more than it was three years ago, is still less than one-half the projected British expenditure for 1958–59, running at something like £600,000,000, except for any additional figure which may be attributable to whatever contribution the Germans may ultimately make to the support of the British forces on their territory. As the West German population is almost the same as ours, and as their national income is 85 to 90 per cent. of ours, the net burden upon the Germans, for whom the defence of the West is just as important as it is for us, is very much less per head than ours. No doubt this will change, and indeed will have to change, in our favour. As a result our proportion of the total expenditure of the West ought to decline, as it has indeed been doing in the last few years, though so far almost wholly at the expense of the Americans.

Let us now consider the policies embodied in the 1957 and 1958 White Papers, and then let us look at their effects upon particular British industries. Then finally we can glance at the effects upon the economy as a whole.

The 1957 White Paper said the following. First, that in the five years 1952 to 1957 defence expenditure of all kinds had been running at about 10 per cent. of the net national income; that is to say, in 1957, for example, it was at about the level of £1,600,000,000 as compared with the £1,400,000,000-odd which is proposed for 1958-59. Secondly, that about one-seventh of the labour force was occupied in defence in one form or another, either in the Services or in supplying the Services. Thirdly, that about one-eighth of the metal-using industries (which are vital in two ways because they are great exporting industries and also because they are the industries where one finds most of the points of growth in the economy) were occupied for defence. Fourthly, that the defence burden was not merely to be measured by the gross sum involved in paying for it, i.e., the manpower and the proportion of the metal-using or other industries taken by it, but also in relation to the Balance of Payments. The defence expenditure involved a heavy burden in foreign currency, and much of it very hard currency, notably the expenditure on our forces in Germany which at that time was, and indeed now is, running at about £47,000,000, plus the currency which the British Service personnel themselves expend, making another £8,000,000 or £9,000,000—a total, therefore, of well over £50,000,000. Thus of the total cost of maintaining the British forces in Germany, which is about £125,000,000, more than £50,000,000 is in hard currency, and this is a large percentage of the total current surplus on the British Balance of Payments.

Everybody knows that in 1956 and 1957 our whole current surplus was more than wiped out by our deficit on capital account. The White Paper said that this could not go on. It therefore proposed to reduce the total burden of defence and to change the character of the means of defence by emphasis on guided missiles and the like. The total figure for 1957-58 was thus to be forced down to a net amount of about £1,420,000,000.

I ought to make clear that the £1,600,000,000 that I mentioned was not a genuine figure, because from it one had to deduct the £125,000,000 to £130,000,000 which we received from the Americans and the Germans, so that the net burden, even in 1957, was actually about £1,475,000,000. But, of course, the proportion in 1957 was less than the proportion had been during the average of 1952-57. In any case, the net figure for 1957-58 was to be about £1,420,000,000, the gross figure being £1,483,000,000, of which £63,000,000 would come back from America and Germany. The year 1958-59 was to cost us slightly less, about £1,418,000,000, the gross figure being £1,465,000,000, the difference this time coming mainly from Germany and very little from America.

Assuming that the national income can be expected to rise by an average of, say, 2 to 2½ per cent. in compound interest over the five years to 1962, this would bring the net burden of defence expenditure by the end of 1962 down to about 7 per cent. of our net national income—a very large reduction, in fact much larger than the mere sound of the fall from 10 per cent. to 7 per cent. suggests. This is because the 10 per cent. related to a smaller national income than the 7 per cent., so that the proposal would clearly trim the effect of defence upon the economy as a whole.

One can see the project in another way. If one looks at the manpower which is to be involved in defence, there is an even more striking reduction. At present the total personnel in the forces is a little more than 600,000. The total number estimated

to be at work serving them, apart from civil servants, is again rather more than 600,000, and the civil servants number about 250,000. So that there is a total now of about 1,450,000.

That is already a significant reduction from, say, the figures of five years ago, when the number in the forces was about 800,000 and the number supplying them was about 900,000, although the number of civil servants was not very much different from now. So there has been a very considerable reduction. But the further reduction projected is down to 375,000 in 1962 for the Services. What the fall must be among those working to supply the Services is, of course, not easy to say. I am pretty confident that it cannot be as big a fall as in the Services themselves, but it may be reasonable to expect, in view of the changes which we shall in a moment consider in regard to particular industries and in view of greater efficiency in those industries, that the figure of 600,000-odd may fall well below 500,000-odd; and it is possibly reasonable to hope that the 250,000 civil personnel in the Services may fall to 200,000; though this may perhaps be miraculous in view of the natural forces for expansion in that kind of activity! Still, the total might perhaps fall by 1962 to 375,000 plus 450,000 plus 200,000—that is 1,050,000 or perhaps 1,100,000, as compared with over 1,400,000 now. By and large, the projected reduction in manpower may release something like 400,000 people for civilian pursuits.

That is, of course, a larger reduction than in money terms. You cannot reduce the cost of armaments in the same proportion as personnel, and in any case the need to reduce personnel is paralleled by the need to increase their remuneration. For this reason, too, you cannot save in the same proportion.

An accretion to the economy of 400,000 more pairs of hands and brains will be a pretty sizeable one. And if you add to that the fact that the great bulge of school leavers is looming up, so that by 1962 we should have another 250,000 boys and girls aged 15, it means that the economy, apart from any other aspect of natural increase, will probably have an increase in the total labour force of 650,000, which is no mean proportion of the total labour force. With a total of 23,000,000, this extra 650,000 would be close on 3 per cent. and 3 per cent. is certainly not to be sneezed at when one bears in mind that, at the time of peak employment in 1955, an addition of 1 per cent. to the labour force would have been regarded as manna from heaven to those who were scouring the country for extra labour.

So far, then, one can reach something like the following tentative conclusions.

First, the net financial burden is going to fall—not only absolutely but still more in proportion to our national income. Therefore, the capacity of the country to meet the defence burden will be greater than it is at present and much greater than it was during the first few years after the end of the war.

Secondly, if we are still in a situation of something like full employment, the economy will be able to spurt ahead by reason of the accretion of labour.

If one stopped there one might say that this was a highly gratifying story. One could say that the British economy was going to be released from some of its burdens, that the stress of overfull employment would be relieved, and that some of the sources of inefficiency and difficulty which have plagued the economy in recent years would be removed.

Unfortunately, one cannot reach such a conclusion with any confidence because we do not know whether the British economy in the next five years will in fact be in a state of near-full employment. If we found that by 1962 we got into a recession

then we should no doubt begin to clamour for more public expenditure. But even if that were the case there would not be any real need for the Government to say, "Very well, we shall once again increase expenditure on defence," because there are other forms of public expenditure which, as far as the reflation of the economy is concerned, could be expected to do the trick just as well. Obviously, we have an enormous road-building programme before us. We have an enormous railway modernization programme before us. If it turned out that we had to import coal again in any quantity—fortunately, it does not look like that now, although it did not long ago—we should need a great deal of investment in our docks for equipment to handle coal imports, thus avoiding having to get coal transhipped at Amsterdam or Antwerp. Clearly, there are many kinds of possible programmes of public expenditure which the reflationist could choose.

However, even this is not the whole story because it is always to some extent misleading to talk in global figures about the total national income, about x per cent. of it, and so forth. What matters to the economy is not the total amount of investment and expenditure to which the volume of economic activity is geared, but where and what kind of investment and expenditure there is. If the fall in the defence programme were to be replaced by a rise in some other public programme, the effect would not necessarily be the same as if there had been no change, because it might well be that the fall in the defence programme would take place at key points of growth—such as, to take an obvious case, the aircraft industry or the radio and electrical engineering industries—whereas the other public programmes which would take its place might have their effects somewhere else. Further, there could be bottlenecks just where expenditure was stoked up, while there might be no removal of bottlenecks where expenditure ceased. Thus we might start a chain of difficulties which would produce the strange combination of rising prices and falling employment and incomes, which can last for some time, as indeed it has in the United States this year.

So, for these reasons, we must look at individual industries and not just consider the global figures. In any case, of course, one has to enter the caveat that this is only a projection; heaven only knows what will in fact happen in 1961-62. Whether the new programmes will by then be technically acceptable to Parliament or to the Services I do not know, even assuming that there is no war or no major military exercise anywhere in the world before 1961-62. And in any case nobody really knows what prices will be like in 1961-62, and whether £1,400,000,000 or £1,500,000,000 will buy what Mr. Duncan Sandys hopes to be able to get in 1961-62, if he is there. All this, of course, again illustrates the cloud of doubts which must envelop any estimates of this kind.

Let us now consider what may happen to individual industries. I have already mentioned, in passing, the most notable one in this field, namely, the aircraft industry. This is one of the few industries in which the cuts in the defence programme already made or decided upon have already had a considerable effect. There has been a significant decline in orders, and still more important, a significant decline in the finance of research and development, enough to give the industry a severe shaking. It is clear that if there is both a decline in the total amount of orders going to this industry and also a shift from aircraft to guided missiles, then many an aircraft-producing firm will find itself in a new world.

Indeed, the industry is already beginning to find itself in this new world. It will have to finance extremely expensive research programmes which the nation has been

doing at Farnborough and at the wind tunnels at Bedford, and it will have to find customers in an extremely difficult world, competing with the very large, well-organized, and go-ahead American industry. It will have a hard fight before it. In my opinion it would be rash to hazard one's money on the proposition that it will without doubt maintain its present relative importance in the economy. Yet it will be sad for us all if it fails to do so, because the industry is a very important point of growth for the economy as a whole.

Clearly the industry itself cannot object to the programme if it is judged to be necessary both fiscally and technically so far as the shift to guided missiles is concerned. But what it does want, and what I think it has a right to ask, is that the climb-down should be as far as possible of an ordered character so that it can adjust itself to the new situation with less jerkiness than otherwise must be the case. There is the complaint that this has not happened, and is not likely to happen. It is a complaint that one hears in other industries.

There we have the first industry concerned—considerably shaken and yet having to face new markets and new expansion for other purposes. Fortunately, it is in a field of activity where there ought to be a general buoyancy anyway, and, of course, I am not forgetting that Transport Command may require an increased quantity of passenger-type planes. Fortunately, also, so far as the non-technical person can see, the industry is not badly equipped technically to face its difficult problems, although whether it is well-equipped by way of organization is perhaps more dubious.

The next industry which is intimately concerned is the radio industry—valves and cathode tubes, for example—and already, I am informed, there has been a considerable reduction in orders for valves and tubes of existing models. Orders for new types, I am told, have so far been maintained and therefore, to that extent, development expenditure is necessary; but orders for the existing models on which the profit is made at the moment have already been substantially cut. If that goes on, then it is possible that the economy of the radio industry will be shaken because the cost per unit will rise. The spread over types for which the development has already been paid will be less than it is at present, and it is conceivable that if the industry itself, like the aircraft industry, has in future to bear a heavier proportion of the expensive development, it may meet difficulty. As a result it may be tempted to copy to an undesirable extent models from the United States or Germany or elsewhere, which from the point of view of the long-term future of the industry and its capacity to make a new expansion, if at any time we really needed it for defence purposes, would be a serious weakness.

Looking at other industries it is not yet possible to find any firm evidence about the effect of the reshaping of the defence programme. That is what makes it so difficult in dealing with this subject, because I am pretty sure that some of the industries whose opinions I have taken and whose views at the moment are largely non-committal may well have a great deal to say long before 1962. They are not, however, saying it yet.

Take, for example, shipbuilding. The actual tonnage of naval shipbuilding is not reduced in the programme, so that the shipbuilding industry, so far as defence is concerned, is not affected. But even if it were, the industry at the moment has its order books full. The average amount in fact is three years' capacity. One does not know how genuine that is because a good many of these orders may be cancelled in the light of the severe fall in freights during the last 12 months. Still, on paper, the

shipbuilding industry could hardly care less at the moment about the reduction of the relatively small amount of capacity which the Navy calls upon.

If one takes the iron and steel industry, whose products go into almost everything that the defence programme requires, it will no doubt see a fall in the output of such things as armour plating; it will also see a reduction in deliveries to some of the engineering firms which produce the numerous types of mechanical and electrical equipment for the Services; but it cannot foresee any serious change in its markets in the near future. This is, on the whole, a small matter for this industry, though if we came into something like a recession, then the 23,000,000 tons of steel now being made and the 26,000,000 tons of steel planned for 1962 might not all find a market. Then it might well be that the iron and steel industry would say a lot more about the effect of the defence programme than it is prepared to say at the moment.

If I may digress for a moment, it is of some interest to note that the steel industry is proceeding with a plan, ending in 1962, based upon two premises, both of which may prove to be false. If they are, the steel industry will be left high and dry. The first is that industrial production will average an increase at compound interest of from $3\frac{1}{2}$ to $3\frac{3}{4}$ per cent. per annum during that period. Industrial production at $3\frac{1}{2}$ to $3\frac{3}{4}$ per cent. per annum would run roughly parallel to an increase in national income of about 2 to $2\frac{1}{2}$ per cent., because industrial production is always more highly geared than national income as a whole, which includes services. In the light of what is happening in the United States and in the field of raw material prices all over the world, this assumption may prove to be a bold one.

Secondly, and not so well known, it is basing itself on the assumption that the steel intensity of British industrial production—that is to say, the rate of steel consumption by British industry—will be significantly higher than it has been in recent years, significantly higher than it now is and is expected in the future to be on the Continent, and significantly higher than it now is and is expected in the future to be in America. Whereas what is called the elasticity of consumption of steel in relation to industrial production on the Continent is 0.9—that is to say, if you compare the rate of increase in steel consumption with the rate of increase in industrial production, you get 0.9—and whereas it was about 0.9 in the United States before the recession (I do not know what it is at the moment), and about 0.9 in Britain between the end of the war and 1954, the steel industry in Britain is projecting an elasticity of steel consumption of 1.1, which means that the rate of increase in steel consumption will be eleven-tenths the rate of increase in industrial production, which is pretty optimistic. It may well be that, if we got into a recession of some kind, a public works programme intended to take up the slack of the reduction in the defence programme might not be steel intensive. Then it is possible that the steel industry might begin to blame the defence cuts if something went wrong. But at the moment there is no blame and no worry.

If you take a wholly different type of industry, wholesale clothing and clothing manufacturing, which is a very important industry in the defence world, the specialized firms that produce uniforms and equipment of that kind are not worried at the moment. Fortunately it is an adaptable industry. The factories and the equipment required for the production of Service requirements can easily be used for the production of civilian-type uniforms. In any case those who run that industry are a pretty smart and adaptable lot, so they are not perturbed by the defence cuts.

The motorcar industry on the other hand will tell you that there is a good deal to worry about in the field of heavy vehicles, because the demand for specialized

heavy vehicles will fall as a result of the defence cuts and those are not vehicles which it is easy to sell abroad, or rather, to be more accurate, the productive equipment which is used for those vehicles is not easily turned over to the production of other things which could be sold abroad and elsewhere. But that is a small part of the interest of the motorcar industry. As for light vehicles, the industry has nothing on which to peg an attack on the defence programme because, assuming that its markets are right for civilian vehicles overseas or elsewhere, it ought to be able to use the capacity which becomes available.

If you take the general engineering industry, you will find that it will say, "Yes, the Services have been rather naughty because they have cut down on some things, like mobile cranes for instance, without giving us any notice. That is awkward. If they go on doing this we shall be very annoyed, because it makes it hard for us to plan ahead. These Service chaps never realize how much forward planning is required in industry, although perhaps they do in their own Services." One hears that kind of criticism, but one does not hear a lot about any real impact upon the volume of activity as yet.

In the general electrical industry, as distinct from that part of it concerned with radio, tubes, and valves, the inquiries I have made show that there is a rather greater volume of complaint about the suddenness of the change and the lack of such planning of the Service expenditure as would enable the industry to know well beforehand what changes are required. I do not know whether it is possible for those who plan expenditure in the Services to be able to provide industry with that kind of information. If it is possible, then industry is entitled to have it done.

To sum up, by and large there is not a very large part of British industry which as yet has been severely hit by the changes or expects anything very severe. On the other hand, where there have been effects, they have been at very important points of growth in the economy and therefore their importance has been considerable.

Incidentally, I ought to have given you an idea of the size of the aircraft industry. It now employs 250,000 people with a very high proportion of highly skilled men, and 250,000 people make a large industry. One has only to remember, for example, that the once great 'King Cotton' now employs only 200,000 people. Of course cotton has suffered a sad decline but it is still a great staple industry. The aircraft industry, employing 250,000 people, is now a sizeable part of the manufacturing sector of the economy.

Having gone through a not very expert or accurate assessment of the effect on particular industries, I now return to the economy as a whole. I have said that what will happen by 1962 will depend more upon the state of the economy as a whole than it will upon the defence programme.

Is it possible to make some assessment of this? It is always hazardous to do so but I shall have a shot at it. I do not see any reason, at any rate yet, why we ought to expect any depression or, indeed, any serious recession. I do not think that the forces which have knocked back the American economy this year are likely to be persistent forces. I do not think that the fall in the incomes of primary producers all over the world is going to continue much further, although it is true that the effects of the fall in the incomes of primary producers have not yet been felt by us. No doubt we shall have some trouble in the next 12 months as a result of the fall that has taken place already. But I do not expect, and I see no sound reason to believe, that this fall will go very much further.

Nor do I see any reason why the British economy should fail in productive technique in any way. The British economy has not shown technical weakness in the past 12 years. In fact it has greatly improved its capacity to produce and its methods of production. What has given us our troubles in the last 12 years has been our failure to solve our financial and budgetary problems. It is for that reason that we had a crisis in 1947, 1949, 1951, 1955—we skipped 1953—and 1957; always in the autumn and in every alternate year, you will note, except 1953. The reason is that we have not yet discovered the way, or, more accurately, that we have not yet chosen the way, of solving our budgetary and financial problems rather than any failure of management in industry, or of the ability of industry to produce what is required and to seek out those who will take what is produced. You will have noticed that I changed "we have not yet discovered" to "we have not yet chosen," because, in fact, the way to solve these budgetary and financial problems is well known in broad terms, as the Germans have shown.

If there is any substance in this reasonably optimistic view of how the economy will appear at the end of the Sandys programme in 1962, then I would say that the programme is good for the economy and good for industry. It should stimulate the economy and provide it with a greater labour force. What is necessary is that industry should show resilience and adaptability which, in any case, it must do if it is to survive other difficulties far harder to meet. German, Japanese, and other competition will test British industry much more than the cuts that Mr. Sandys has projected. I should be inclined to say, but here, of course, I speak as a complete outsider, that we should be more worried about whether the Sandys programme will deliver the size and quality of defence we need than about its effect upon industry and the economy.

DISCUSSION

CAPTAIN C. F. J. LLOYD DAVIES: If under the new defence policy the majority of the manned fighter aircraft are not required, this is bound seriously to affect the aircraft industry on a long-term basis. In what directions would the lecturer suggest that the industry should reorientate itself?

THE LECTURER: It seems to me that passenger aircraft and freight aircraft are the only line. I admit that that is very difficult in competition with American industry.

CAPTAIN C. F. J. LLOYD DAVIES: Could the industry in that way employ 250,000 men?

THE LECTURER: If you take the total world demand for such aircraft at present, then the answer is no; but if you take the demand which may well exist by 1962, then it is possible. The trend of expansion of air travel has been very high in recent years, and it may continue to be as high, in which case the total requirements will be much greater than in 1952. But the big question-mark is how much the British industry will be able to get of it.

LIEUT.-GENERAL SIR JOHN ELDRIDGE: May I pursue the problem of research and development a little? The lecturer mentioned this in connection with aeronautical engineering and to some extent in connection with electronic engineering.

The Government have carried out a very great deal of research in mechanical, automobile, chemical, and metallurgical engineering, and so on. One of the purposes of the White Paper a year ago was the removal of scientific personnel from military to civil work. First of all, is it probable that industry will be able to take up, or be inclined to take up, that part of research and development which has had to be thrown over, and secondly, will it in fact be able to absorb the scientific personnel who will be thrown up, or is there a danger that we may find them going overseas?

THE LECTURER : To take the second point first, I do not think that British industry should have any difficulty in absorbing on satisfactory terms the scientific personnel displaced, save that I have no doubt that some of the people concerned may well go to America and Canada for reasons which would take some of our engineers and scientists anyway ; but apart from that I do not think British industry should have difficulty. Indeed, I think it would be avid for that personnel.

The first point is more difficult to answer. I think that British industry will grumble very loudly indeed about having to take over the cost of the research and development which the Government have been taking, but one ought not to take that quite as seriously as industry will ask people to do. Like everybody else, industry will grumble very often and shout a lot, whereas in the end, of course, it turns out to be quite happy. In principle, anyway, I do not believe that one can sustain the proposition that the taxpayer should pay for research and development which is necessary for private industry. That is a proposition which I think is wrong. Of course, the application of the true principle—which is that the taxpayer should pay for the research that he needs and private industry should pay for the research that it needs—is very difficult in practice because of the marriage of the taxpayer and private industry in so many ventures. Nevertheless, that is the principle. If the taxpayer says that he no longer wants a wind tunnel for such and such reasons—that he is busy with missiles for example—and if the aircraft industry needs the wind tunnel and wants it, then it can properly be asked to pay for it.

LIEUT.-GENERAL SIR JOHN ELDRIDGE : I would expect the Government establishments which are equipped capitally would probably go on ; it would be ridiculous, for example, to put Bedford somewhere else. But the point is that a great deal of very forward thinking has been done and is being done on Government account in regard to research, and if this were to be allowed to lapse because industry, for financial reasons, felt that it could not carry it on, the position could be serious.

THE LECTURER : In a sudden change of this kind, I imagine that there must be a great deal of wastage of highly valuable knowledge and experience. Certainly that is one of the things that the aircraft industry will have to face.

DR. G. V. LACHMAN : So far as the financing of research is concerned, the lecturer suggested that industry should bear this expense *in toto*. It is already difficult enough for the aircraft industry to compete with its American counterpart because of the greater strength of the American industry in general, but since the research of the American industry is well backed by the Government, the British aircraft industry would be badly handicapped without Government sponsored research. I am not referring to *ad hoc* research, which is generally done by industry itself, but to long range research extending to subjects for which immediate application is not yet apparent.

I would also like to call attention to the fact that this relatively small British aircraft industry of 250,000—I thought that the figure was less but probably the lecturer is better informed than I am—apart from its contributions to defence, provides an export of over £100,000,000 in hard currency per year. That is not to be sneezed at. Research has helped to establish the aircraft industry as our second largest exporter of manufactured goods. We cannot expect, however, to carry on for all time with our Viscounts, Britannias, Comets, etc. ; they are running out. In contrast to other well established industries, the aircraft industry is still extremely dynamic and can never afford to rest upon its laurels. We have to look for the new article, and the new article requires research, especially fundamental research. It is not only the actual research work itself, but also the productive contributions from the research workers in the research establishments.

THE LECTURER : On the question of fact, I see in the current *Monthly Digest of Statistics* that the total number employed in the aircraft industry in December, 1957, was 257,600, a little more than I said.

On the question of the capacity of the aircraft industry to meet the cost of research, I admit that the principle that I propounded is difficult of application in a world in which

the American industry gets the benefit of United States Government-supported research. It would be difficult in either of two circumstances, (a), if the American Government deliberately subsidized research for civilian purposes (I do not know if that is so), and (b), even if it did not, if the American Government continued to require a large number of aircraft and, properly, paid for the research required.

In this situation, one has to ask oneself this question: is it then right for the British taxpayer to subsidise a private industry, for that is what it amounts to, simply because that industry has to face subsidized competition elsewhere? That is not an uncommon question that the taxpayer has to ask, and in many cases the taxpayer, much too easily, replies, "Yes, I will do it." That is a mug's game in most cases. In most cases where the foreigner subsidizes an industry it is better to let him get on with it and not try to compete with him in subsidization, because (a) to some extent in some cases you will find that he gets tired of doing so, tired of spending the money for us, for that is what it amounts to; and (b) in most cases where it is feared that his purpose is to smash our industry or do something of that sort and then raise prices, it is not true. In the great majority of cases that does not happen.

However, while I think that the bias of the taxpayer should be against subsidizing an industry in that unfortunate situation, still there can be cases where he ought to do it. I do not think that the test should be whether Great Britain needs an aircraft industry, for that is not the true test. Great Britain does not need any industry; there is no particular industry that Great Britain needs, thinking only in terms of economics. It does not matter whether you make tin-tacks, bootlaces, or jam jars. What matters is that you make something that is sold. Neither tin-tacks nor jam jars are going to be required eternally and neither of them is sacrosanct, and not even aircraft are. There are plenty of fine economies that will not produce aircraft in the future. So the answer has not to be "Yes" because for some economic reason aircraft production is required, notwithstanding that I said that aircraft production is a point of growth and therefore valuable—for there are other points of growth too. But supposing that our defence programme changes? After all, we are only talking about 1962. We hope that the British nation will be alive after that. Therefore, it will probably, unfortunately, still have a defence problem. Is it reasonable to expect that the day will come when once again we will need an expanded Government-supported aircraft industry? If so, then one ought to subsidise it merely as an insurance against that eventuality. Heaven only knows what decision a Minister will take on that, but it is quite possible that the answer will be "Yes."

CAPTAIN E. T. LARKEN: The lecturer gave us a very clear picture of, in general, a release of talent and a release of potential effort, both financial and manpower, as a result of the reduction of Service expenditure. I should like to ask for his views on how that is going to be channelled. Some may go into the production of increased capital goods or increased goods to help in the foreign exchange situation. It may be that some of it will go into the production of consumer goods for internal consumption. In what direction should it go and what means are available to be used for ensuring that the released effort is used beneficially for the country as a whole?

THE LECTURER: Ideally, the resources released should for the next five years go relatively more into exports than into the home industries which produce things that make export industries efficient. Of course, the machine tool industry which sells its tools to a Birmingham manufacturer can be just as important as the Birmingham manufacturer who sells something abroad. That is almost certainly necessary, because we cannot possibly hope that our balance of payments problem will settle itself very quickly.

What methods are available? The methods that the Government have been adopting in the last two years or so, reducing the pressure of home demand by playing on the monetary system, the banking system, and so on. There are no other known methods, unfortunately, except physical controls, and although one of our great political parties thinks that physical controls are likely to be more successful than monetary controls,

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theoretically and practically that is very doubtful and our experience of physical controls from 1945 to 1950 was not a happy one.

CAPTAIN E. T. LARKEN : It seems to me, as a Service person, that there is a very great prospect that the pressure of public opinion will divert the talent which has been saved into rather wasteful consumer goods. Does the lecturer think there is any prospect of that happening ?

THE LECTURER : I dare say that it could happen, but it would be a matter for Government policy to prevent it from happening.

MAJOR SANT KUMAR : The Defence White Paper relies more upon the use of the nuclear deterrent, which would mean that the production of all conventional arms will be reduced considerably. Would the lecturer please give his views as to what effect this policy will have on the Government ordnance factories which are only geared to produce conventional arms ?

THE LECTURER : The greater effect will be on the ordnance establishments. Fortunately most of the industrial establishments which are concerned with conventional weapons are pretty adaptable. Generally they are of the engineering kind, and they would not find it too difficult to shift to other forms of civilian production. I would not expect any great difficulty. So far I have not heard of any hand-wringing or any great trouble in those industries. Of course, if the drop were very much bigger, it would be so sudden that it would be very difficult for them to turn over to other kinds of production, but I think they are adaptable enough to be able to do it.

VICE-ADMIRAL E. W. LONGLEY COOK : In his extremely able lecture, the lecturer rather brushed aside shipbuilding. I should like to say that quite a large section of the shipbuilding industry values the defence orders very highly indeed and we shall be extremely concerned if they are cut off. As the lecturer said, they are not being cut off under the present programme.

I was rather surprised that the lecturer did not at all mention the question of labour—labour relations and actual labour. I think he would agree that our rate of productivity has not gone up in this country at anything like the rate of increase in some other countries. I think that we still have in this country—perhaps it is our greatest asset—a greater percentage of inventive brains than any other country in the world. I do feel that after more than 20 years of full employment, more than 20 years of preaching to labour that they can have more money for less work, we have got to go through a bad time before we become healthy and competitive again. I do not believe that we are sufficiently competitive at the present time. We have got to realize that the rest of the world does not owe us a living.

I should like also to point out that the shipbuilding industry is not subsidized, nor is the ship-owning industry, and that the shipbuilding industry pays for its own research and development.

THE CHAIRMAN : I shall not spoil your afternoon by making any lengthy remarks. I felt the same as Admiral Longley Cook when he said that the lecturer had not referred to labour. The lecturer may not have referred to it in detail, but he put a tremendous point when he said that we might have that large number of extra men on the labour market. I am not a hard-hearted creature, but I believe that this may result in disciplining labour, and if labour is disciplined, surely industry will gain enormously.

I hoped when I came here after luncheon that we should find our guest an ally of the defence Services, someone who would say that these cuts in the defence Services have stunned industry. But the lecturer has said that industry can take the cuts quite easily. Of course, that is the truth, unpleasant though it may be to myself and others. Industry can take the cuts all right.

The lecturer used the word 'grumbling.' There has been 'jam for tea' in industry for nearly every month of every year for the last decade, and I think it is only natural

that there should be some grumbling when between two pieces of bread there is only one spread of jam! Take farming, for instance. There is today a terrific scream about eggs, butter, and pigs. But farmers have not been doing badly. There cannot always be jam for tea in farming or in industry. They must take the rough with the smooth and level it all out. British industry has not had a bad time.

If I had to prophesy what the aircraft industry had better look to in the future, I would say that they must look to transport aircraft, cargo or passengers on board, where it would be a matter of just pushing a button and sending them off 5,000 miles away without any human aid.

I have listened on many occasions at the Staff College and elsewhere to economists' discourses. I have always paid the greatest attention to them. I have always found that about two-thirds of the way through my head was going round and round and round, and when the lecturer sat down I said, "Thank God." I can honestly say that this afternoon I have listened to all that the lecturer said with great enjoyment, and I have learned a great deal, as I think the audience here have done. I thank him very much indeed. (*Applause.*)

HISTORY OF TRADE UNIONS AND THEIR FUNCTIONS TODAY

By SIR TOM O'BRIEN, M.P.

On Wednesday, 5th November, 1958, at 1.30 p.m.

MAJOR-GENERAL L. O. LYNE, C.B., D.S.O., in the Chair

THE CHAIRMAN : It is a great pleasure for us to welcome Sir Tom O'Brien on his first visit to the Institution. He has had a long and distinguished career, which started in the first World War, when he was clever enough to disguise his age, to the extent of four years, to Lord Kitchener's recruiting sergeant. That was no mean feat ; at the age of 14 he persuaded the sergeant that he was 18. He therefore has first-hand military experience.

Sir Tom has been Secretary of his trade union since 1932 and has had very wide experience as a member of the Trades Union Congress and, indeed, for two years as its President. His experience has been both at home and abroad. I am sure that nobody is more fitted to talk to us on the history of trade unions and their functions today.

LECTURE

YOU referred, Sir, to my military experience. That is many years ago. Looking back, I think that one of the reasons I have interested myself in trade unionism is that members of Lord Kitchener's Army were paid 1s. a day. We were not promoted, as you gentlemen have been, to high rank ; as General Booth said, in the early '90's, we were the 'submerged tenth.' Having made an allotment to your mother of 3s. 6d. a week, you were left with only 3s. 6d. for fighting for this great, beautiful, and gallant country. That was many years ago, and I think that members of the Services today, whatever their rank, appreciate that they are far better off serving their country than we were, and that a grateful country recognizes their merits and qualities.

The subject on which I am to address you concerns the trade unions in modern society. It is very difficult for anyone to understand the functions of the trade union movement in Britain unless he has at least an elementary understanding of why they exist and of the background to their development. To do the subject justice would take a series of lectures. It is full of interest and full of history. Anything which deals with human beings must necessarily be full of interest and of history.

The beginning of the trade union movement in this country is a story by itself, one which can be sketched only briefly in a lecture of this kind. I will try, in the time that I have, to give you some idea of how it all started, where it is today, and what it is likely to be in the future.

Like many other things in life, like many organizations which exist today, the trade unions were built on injustice. Just after the Industrial Revolution, which is not so long ago, the country became so unjust and people were so unjust to each other that there was no such thing as co-operation. The religious bodies did their best, but many members of the various denominations felt that one had to be Christian only on a Sunday and that their wonderful faith did not apply to the rest of the week.

It therefore happened that our economy was built on such unfairness and on so many malpractices and injustices that unprotected, defenceless men and women were forced by the very urge of their human nature to combine into organizations to protect themselves. Women were working in the mines of this country up to the second week before their pregnancy. Hundreds, thousands, of women were working

down in the mines. I am not talking about Russia. I am talking about Britain. I am not referring to the past in order to throw mud at it, but I must be factual in order to give you some idea of the beginnings of trade unionism. If you have read about it, you probably know the subject better than I do.

In our textile mills in Yorkshire and our cotton mills in Lancashire we had little girls and boys of six or seven years of age working from six in the morning until six at night. This is within living memory. It did not happen as far back as the time of Crecy or Agincourt; it happened in the last century.

All these men and women were working in these appalling conditions, which were a hangover from the Industrial Revolution, because governments and political parties were not ready to deal with the economic situation as they found it. Today the governments and political parties can cope with the problems of nuclear energy and science, but, to do justice to them, the governments of those days were taken unawares by the Industrial Revolution and were not in a position to deal, by legislation, with the industrial problems which arose. The principle of *laissez faire* was accepted. The belief had existed for decades that it was not the function of government to interfere with industry and not the function of government to deal with the problems of the country's economy. The result was that there was a free market of injustice; that is what it amounted to—a free market of injustice.

The railway system was developing at that time, as were the steel industry, the tin plate industry, and other industries. The story is the same for all those industries. The employers of the day were, in the main, individuals, because it was long before the development of corporations and joint stock companies; they were tough industrialists who had not the time, the opportunities, or the ability fully to realize the serious situation of their workers.

Against that background, the trade unions started. The movement began on the land among the agricultural labourers. In 1834 Lord Melbourne was Home Secretary; soon afterwards he became Prime Minister. As Home Secretary, he approved the sentence of seven years' penal servitude on six farm workers from the village of Tolpuddle in Dorset, and he sanctioned the decision that those six farm labourers should be put on a convict ship and should serve their penal servitude in the Colony of Botany Bay in Australia. That was in 1834—not very long ago.

These six harmless British men had been arraigned before the Assizes as if they were criminals, as if they were spies, as if they were saboteurs, and had been sentenced to seven years' penal servitude and to transportation. With the permission of the great Lord Melbourne they were transported to serve their sentence abroad.

What was their offence? They decided to join a union. At that time there was only one big union in the country—the National Union of Agricultural Workers. It caught fire throughout the land. These men, who joined that union, were wardens of their local church. Each one of them read the Bible every day of the week. These innocent men were convicted as criminals and sent to the concentration camp which Britain held at that time.

Let us get this right: it was not Hitler or Lenin who invented concentration camps. It was our wonderful country which invented concentration camps. Let us keep the history in mind. We had our concentration camps, but not in Britain; we sent people to places like Botany Bay. We had our concentration camps, and we sent people there who did not deserve to be sent there. Let us not be too smug. We Britishers, who love our country, our Monarch, and our institutions, must not be too smug about ourselves.

These six men were sent to Botany Bay, and the whole trade union movement of this country was started. The workers formed themselves into organizations; each craft, each trade, each industry had its own union. The British trade union movement did not develop on an organized plan as our new towns have developed; it 'grow'd,' like Topsy. The trade union movement in Britain did not start by a genius planning the whole thing, as an architect plans a magnificent building. It did not happen that way, and thank heavens it did not. It just grew and grew, as industry grew and as occupation grew. There is nothing so British as the British trade union movement; it is a British institution. Before I finish I will come to whether this wonderful British institution might be in danger of being sabotaged by alien influences.

Skipping over the best part of half-a-century, I would say that today we have a trade union movement which is second to none in the world. We have unofficial strikes and we have official strikes, but we must remember that over 9,000,000 workers in Britain are organized into 184 trade unions. That is a great many people. They are from all the major industries of the country. They are professional men, such as bank clerks and administrative workers; men from heavy industry, such as steel workers, shipbuilders, and miners; men from transport, such as railwaymen and bus workers; men such as draughtsmen who are in small but important occupations; sign writers, building trade workers, and even workers from the cultural industries—although I do not know whether we can call the entertainment industry of the country cultural at the moment. In all sections of the community you will find a trade union. It is a wonderful thing in our democracy to know that these 184 trade unions, representing over 9,000,000 of our fellow countrymen and their families—probably 25,000,000 people—contain a great mass of members who go about their work, day in and day out, with a masterly, admirable, and commendable restraint and discipline. We had the recent bus strike, although I will not deal with it here. We have had other strikes. But when you think that there are tens of thousands of occupational grades and hundreds of industries in which our trade union fellow countrymen work, it is interesting to reflect that even during the period of the wild-cat strikes in the docks and in Smithfield Market, the overwhelming majority of these 9,000,000 men and women turned up to their jobs every day, in the offices, in the factories, in the workshops, in the mines. They signed on or clocked on, did their jobs, clocked off at night, and returned to their homes.

I mention that because the temptation is for those who are not trade unionists or know little about the movement to criticize the whole of the trade union movement because of the conduct of a noisy minority. I ask you to resist that temptation. I ask you to remember what I have said when you experience a strike, particularly an unofficial strike, and not to condemn the whole of the trade union movement because there is a noisy minority who want to run off the rails, as they did at B.O.A.C. at London Airport the other day. That is not the spirit of the trade union movement of Britain. What happened at London Airport does not reflect the true sincerity of the British worker. It is not what the British worker wants to do. It is the result of callous, calculated, bad leadership on the part of people who want to usurp the responsible leadership of the trade union movement of this country. When you have incidents of this kind, I beg you not to think that that is the British worker acting or talking; it is not.

Strikes occur, and it is a good thing that the law of this country allows the right to strike, the right of the trade union or the workers to withdraw their labour. It is a legal right to strike. It is the only right that organized workers possess.

If they have not the right to withdraw their labour when they feel that they have a legitimate grievance—I am talking about ordered strikes, not those for political ends—they have no rights at all. The Liberal Government of 1906 passed the Trade Disputes Act which made it legal for a trade union to declare a strike.

But the right to a thing is one thing; to abuse that right is another. For example, we have the right to enjoy freely our beautiful parklands and gardens in our cities and in the country. We have the right, in this wonderful autumn, to go through St. James's Park, Green Park, Hyde Park, and on the heaths and to see for ourselves, freely, as if we owned them, the solitude and the beauty which a few moments of leisure can offer. That is a right. But if we started to pluck up the flowers and lacerate the trees, we should be abusing that right. We should be abusing the right which the country gives us to enjoy the amenities which are there. We can abuse that right by desecrating what we see.

The same principle applies to the right to strike. This is not very often stated, even by some of my colleagues. The right to exercise the right to strike must always remain. I hope that no Government, no political party, will ever take away the right of the worker to strike. It must always remain as a right. It is the only weapon which the organized body of workers possesses. But to exercise that right, in the first place, is immoral. That right to strike must be exercised only when every possible avenue of settlement has been explored and has failed.

There are those in this country today who are not of our way of thinking and who give their allegiance to an alien cause, Communism. They are British subjects but their ideals and their ideology do not belong to us; they belong to the Kremlin. Other than by those who exploit grievances for ulterior purposes, the right to strike is, and ought to be, exercised only when every other avenue has failed. Unfortunately, in our time we have seen the right to strike exercised in a most irresponsible manner. We have seen bodies of men being influenced by shop stewards. They have repudiated their Executive Councils, they have repudiated their own trade union leadership, their own General Secretaries, their Presidents. They have repudiated the constitutional authority of their unions and have taken the law into their own hands. That sort of thing ultimately will force any Government to introduce legislation of an adverse character, penalizing the majority for the faults and immorality of the minority. That is our trade union problem today, and I will refer to it in a moment.

This right to strike must remain inviolable, exercised only in the strictest atmosphere of responsibility. I am therefore sorry that the present Minister of Labour, Mr. Iain Macleod, a close friend of mine, has seen fit at this stage to end the Industrial Disputes Tribunal. The employers and the trade unions of this country have fought hard, jointly, to bring about a system of collective bargaining and of conciliation which is second to none. I referred very sketchily to the beginnings of the trade union movement. Since then, we have built up over the years conciliation machinery in every industry. I referred to strikes. There is no need for strikes in a civilized and sensibly controlled industry. We have conciliation boards in every industry; the negotiating machinery is almost perfect. If it does not work, something is wrong on both sides, as there is at London Airport; there is something wrong somewhere. I am not apportioning the blame, for the matter is the subject of inquiry, but as an experienced trade union leader I have my own views. There is something rotten in the State of Denmark for things like that to happen.

In most industries there is arbitration machinery, legislated for, not by the Labour Party or the T.U.C. or the Conservative Party, but by the employers' and the workers' representatives. In other words, in every industry that matters in this country we have proper agreements, proper machinery for settling disputes, from the bottom to the top. We have that in every industry that matters. That must be safeguarded, because it was created not by the dictatorship of the unions, imposed of employers, or vice versa, but by their joint efforts; it was moulded jointly by both partners, the industrial employers and the trade unions. They have created this machinery in our time and generation, and it works.

At the beginning of the war we felt that if an industry could not settle its problems—this is very important for our future—then instead of striking, even as a last resort, it should be able to go to an impartial tribunal; both the unions and the employers should be able to take their grievances there and have them settled. That is how the Industrial Disputes Tribunal arose, or as it was called in the early part of the last war, the National Arbitration Tribunal.

For some reason or other the Minister of Labour feels that the time has come to do away with the Tribunal. His decision is causing considerable perturbation, not only among trade unions, trade union leaders, and the T.U.C. General Council, of which I am a member, but also among many employers' organizations. It has nothing to do with party politics. This is an industrial matter on which the Minister has made his decision. We have been making representations to him since last January, but he has decided to abolish the Tribunal. It is one of the most inexplicable, nonsensical decisions that we have known in our experience. He is doing away with the very thing which would prevent further official and unofficial strikes.

If a trade union cannot settle its problems within its own industry, it is bound to consider not arbitration but taking strike action, but when the Tribunal existed the Executive of that union could tell its members, "We have a good case, but we will not strike; we will refer it to arbitration." The employers, on the other hand, could say, "The union is getting too difficult. We will have the dispute referred to the Tribunal."

You are a body of educated men and women and I will leave with you whether the Minister's decision in an important section of industry, vitally affecting the economy of our country both today and tomorrow, is a wise decision. We of the trade union movement and most of the employers' organizations feel that it is an unwise decision to take, because over the years we have built up a system of conciliation machinery and of collective bargaining which is the envy of the world.

There is nothing like it in America. In collective bargaining and a system of conciliation, America is about 30 years behind us. There is nothing like it on the Continent. Many of the unions in France are Communist ridden. There is nothing like it in Italy and there is nothing like it in Germany. I returned from Germany last week.

We of the trade union movement of this country therefore justifiably boast about our sense of responsibility. We feel that we are a responsible body, not only as individual trade unionists but as the T.U.C. We try to apply our minds to the solution of industrial problems in co-operation with the employers and with governments, whatever their political colour. We try to act and to work as Britishers for the interest of our country. We know that we are doing that, in spite of the misrepresentations which very often occur in certain disputes when reported in the newspapers.

What is the future of trade unionism in Britain? Some of us are quite confident that while we work on the principles which gave us birth, while we keep to the spur that created us, all will be well. We believe that if there is an argument with the employers, we talk their language and they understand our language. We believe that if we go to the boss and talk to the boss about the problems of our people, he understands what we are talking about. If he talks to us, we understand what he is talking about. If we keep to that fundamental principle, all will be well for the future of industry in this country.

If we depart from that, if we try to use our trade unions to further political ends—the ends of the Labour Party, or the Conservative Party, or the Liberal Party, or the Communist Party—trade unionism as we know it in Britain will die. We who are doing our honest best as trade union leaders are therefore trying, and trying with great success, to keep the people we represent and whom we have the honour to serve on the rails. As I have said, the mass of the workers of this country are on the rails.

Attempts are being made, and have been made for some years, by certain people to infiltrate into the trade union movement of Britain so that the trade union movement, or individual trade unions, can be converted not to work for industrial justice and social justice but to work for the ends of the Russian Communist Soviet Government. We have them in this country, and there is no question but that many disputes which we have had in recent years have been fomented and provoked by Communist propaganda and by individual Communists.

They are logical in their own intentions, because in a country like ours, if the 9,000,000 strong trade union movement could be grasped under the control of the Communist Party, imagine the weapon they could use to bring this country to its knees. That is the political end. They make no bones about it.

But the people of this country will not stand for that sort of thing. Nevertheless, I warn my fellow workers and fellow countrymen not to be smug about these developments. It could happen here. It has happened in France. France had one of the most magnificently organized trade union movements in Europe at the time of the war. Now the trade union movement in France is worthless. It is split into political camps for political ends and for Communistic purposes.

I told your Chairman and Secretary earlier that when the armies were on the Gothic line in Italy, Sir William Lawther and I were invited to go to Italy to try to reform the pre-Mussolini trade union movement of Italy on democratic lines. We partly succeeded. We knew that the Communists were trying to get into the movement; they succeeded, but they did not control the whole of the movement. The British T.U.C. take a great deal of pride in that. In those days we were honoured by being the guests of Field-Marshal Lord Alexander for three days at his General Headquarters, in Siena. We reached there after eight weeks slogging in Italy; we almost believed that we had won that war ourselves, never mind the 1914-18 war! The Prime Minister, Mr. Harold Macmillan, was then Minister for the Mediterranean, resident in Italy, and we owed a great deal to him for the way in which he tried to help us to do our job. We formed a very close friendship. There was no transport, Italy was still in the war, and although the Germans were in the north, the civil population were completely demoralized. There was a great deal of difficulty in getting about and in getting water for washing, as well as in getting such things as razor blades and the little things we missed during the war. The town marshals, British and American, kept us going in more than one sense! But most of the

organization was due to Mr. Harold Macmillan ; he need not have done it, but he went out of his way to help us. He knew that we had a job to do and he helped us to do it as far as the situation allowed. I was very grateful to him and we formed a friendship which has lasted from that time.

He arranged for us to visit General Headquarters in Siena, where we met Field-Marshal Lord Alexander. We had dinner with him on three nights, and he arranged for us to sleep in a nearby castle. During dinner we were talking about one thing and another, and Field-Marshal Lord Montgomery's name cropped up. I believe he was at the Institution the other day. I read something about it in the newspapers ! He is a very clever man ; he should be in show business. He has an appeal to the people, or he organizes an appeal to the people of this country and the world in the opposite direction to Brigitte Bardot. He does not put salesmanship over in the way that she does but he has the same ideas !

He was not at dinner ; unfortunately, he was on the other side of the country. We had a pleasant but frugal meal, and while we were dining we said how brilliant the 8th Army was not only in Africa but also in Sicily and Italy, and we asked for permission to visit the line. Lord Alexander said, " I am sorry, you cannot do that. I am responsible for your safety and your lives." The line was not very far away and we persuaded him to give us permission to go. We went into the line. It was not like the Balaclava line, of course, and we did not get into too much trouble.

The Foresters Regiment were holding this sector. It was a very hot day and we had to go through a lot of dust to get there. The local Commanding Officer said, " You cannot stay very long because they will be coming over in a minute," but we said, " We will duck. We must talk to the troops." He brought a few of the troops together as they came down from the line and we talked to them in the corner of a hill. The only grievance they had was that they got no beer ; the Americans a few miles away had plenty of canned beer and our lads had none. We told the Commanding Officer and said we would try to do something about it.

Before we departed we saw Lord Alexander again. He said, " Evidently you are safe. How did you get on ? " We told him that the troops' only grievance was that they had no beer, and he said, " I agree. I have written about it. When you get back to London next week, do something about it."

When we returned to London we went to No. 10, Downing Street and saw Winston. We had no appointment ; we simply knocked at the door and he happened to be in. We went in and had a couple of whiskies and sodas, and he said, " What is your trouble ? " He had heard all about our visit to Italy. We told him that there was no beer for the troops, and he said, " Why are you telling me ? Can't they get it out there ? " But within three or four days there were thousands and thousands of cases of canned beer delivered to the front !

When I went to Nottingham a year later to be considered by the selection committee as Labour candidate for Parliament, I was unanimously elected from about 21 opponents, and I am convinced that it was due to the fact that they believed I brought this beer to the front for the Nottingham lads. I believe that is the reason I was selected, and I have held the constituency ever since.

Monty had a flair for publicity, but my impression was that there was not the slightest jealousy, envy, or animosity in Lord Alexander's make-up about Monty's popularity. They were both distinguished soldiers, one had the flair for putting himself over and the other did not want that flair. In my view Monty amused Lord

Alexander rather than engaging his wrath or envy or jealousy. They were two people who were indispensable for the campaign ; Monty respected Lord Alexander's statesmanship, but Lord Alexander had no feeling whatever of animosity towards Monty, and was amused by his public antics rather than annoyed.

I want you to ask me questions and I want a discussion, and I do not think it fair for a lecturer to take all the time in putting over his own views. I will therefore conclude. The future of the trade unions in Britain is good. But I repeat the warning, or the caution, not only to my fellow trade unionists but to people at large, to watch this attempt on the part of the Communists or Communism to infiltrate into our trade unions. It is not very serious at the moment, but it could be serious. I never believe in that comfortable doctrine, "It could not happen here." It could and it might ; I do not think it will, but it might. We must have eternal vigilance in the protection of our industries.

We are an island nation of 55,000,000 people. The world does not owe us a living. If we drop by the wayside there will be no ambulance to pick us up. We have to fight for ourselves. We are dependent on the seven seas and on the five continents for our trade. If we lose some of our markets in the world, for one reason or another, we can easily have staggering unemployment figures in this country. I do not believe that any political party in this country wishes to rule this country in a way which would create large blocks of unemployment ; I am a politician as well as a trade union leader, but I do not believe that it is right for any politician, whatever his party, to suggest that another party is trying to create unemployment in this country. Personally, I do not believe it. It would not suit the Conservative candidate in any constituency to have masses of unemployment. It would not suit the Labour Party, whether in government or in opposition, to proceed on the basis of nationalization or any other kind of control which would create unemployment.

Nevertheless, unemployment of a serious kind can happen by the very workings of economic law. If we lose our overseas markets to a large extent, it does not matter what government we have in power ; we shall have unemployment and near bankruptcy in this country. It is the duty of the trade union movement and it is the duty of trade unions, it is the duty of workers and the duty and responsibility of employers, large and small, and it is the duty of the community and the government, to see that nothing is done to injure our industry in a way which would entail the loss of our markets abroad. We have nothing to help us other than the coal beneath the ground and the fish around our coasts, and even the fish are going farther away.

We are dependent entirely on our manufactures. We are dependent entirely upon the skill and craftsmanship of our people. We are dependent on the intelligence and the research abilities of our *entrepreneurs*. We are dependent upon the trust of those who can invest in our industries, whether a small or a large sum. We are all dependent on the mutual confidence of the community. If that confidence is shattered, this country will find itself in serious difficulties, from which perhaps we shall never recover. We are living in a competitive world. Western Germany, with magnificent courage, is emerging. Japan is rehabilitating herself. America is holding back in many ways. There are 55,000,000 people in Britain. We cannot survive in this new, highly scientific world if the community is permanently divided and its confidence shattered. The trade union movement must play its part. We must keep Communism from our movement, because the Communists are trying to infiltrate into it, not in the interests of Britain and her people but to further the political ends and weapons of an alien government.

Our trade union movement is both virile and British and it stands for the principles which I have advocated. The employers of this country can settle their differences with us. We treat with any government, Socialist, Tory, or Liberal. In that way, if we can measure our controversies and keep our arguments within the atmosphere in which arguments should take place, and if, having had our arguments and our quarrels, we can go forward as an industrial nation with all sections working together, this country will not only survive but will continue to lead the world in more ways than one.

DISCUSSION

BRIGADIER H. A. JOLY DE LOTBINIÈRE : Sir Tom has rightly stressed the danger of Communism. Is anything being done by the trade union movement to overcome the apathy of nine out of ten of its members in voting for their representatives in view of the fact that so many of the trade union representatives are Communists ? For example, the Electrical Trades Union is practically run by the Communists. Can anything be done to overcome this apathy and to explain to people that it is essential for them to vote for their own representatives and not allow themselves to be led by the Communists ?

THE LECTURER : It is very difficult for something to be done about it from the top. The T.U.C. has very limited authority. It is not generally recognized how limited is the authority of the General Council. We have no authority to interfere in the ordinary running or operation of individual unions affiliated to the T.U.C. To that extent we are handicapped in preventing a trade union from falling under Communist control. As you rightly said, it is known to everybody that the Electrical Trades Union is Communist-controlled ; the members of that Union are not Communist by a majority but it is Communist-controlled. The only way for a union, whether the E.T.U. or any other, to be properly controlled is through the membership, not through the T.U.C. ; we cannot prevent the leaders of the E.T.U. from being appointed. The members appoint them, and it raises the question of apathy. If the members of unions do not take the trouble to vote and to vote for the proper person, you will get all kinds of abnormalities, like Communist-controlled unions.

But be of good heart. For many years the A.E.U. was a Communist-dominated union, but because the officers of the A.E.U., the active membership and people like myself and my colleagues on the General Council gave warnings of these developments from time to time, the A.E.U. in the main has rid itself of Communist domination. The Executive and leaders of the A.E.U. now are true British democrats and first-class leaders who owe allegiance to no one but their Monarch. They do not owe allegiance to someone outside the country. If the A.E.U. can do it, the other trade unions can do it. The only way to handle this apathy is by constant exhortation in journals, in the Press, in lectures, urging trade union members to value their freedom, to value the work done by their own trade unions, and to take an intelligent interest in the trade union movement. We must urge them to attend meetings when elections take place or to take the trouble to ballot when ballots are held. The solution to this problem is in the trade unions themselves.

They are improving. Through exhortation and example they are now being persuaded to take a greater interest in their own trade unions and are voting for people they know will run their unions in the proper spirit of free democracy, owing allegiance only to our own country.

BRIGADIER C. A. L. BROWNLOW : May I ask a question on one aspect of this huge problem which Sir Tom has so ably described ? It concerns the scope and nature of the activities of shop stewards. I commanded a battery in the first World War and my sergeant-major, an excellent man, had been a shop steward. I should like to know more about these shop stewards.

THE LECTURER : Shop stewards are a very useful part of the machinery of trade unionism in our country. The idea of having shop stewards, after the first World War,

when the shop steward movement developed, was to oil the machine of industrial peace. If people on the factory floor had a grievance, they could call for one of their elected representatives, a fellow worker in the factory, and not wait for a week or a month while the trade union official came down. The shop steward, instead of waiting for the managing director or the chairman of the Company to come home from his Swiss holidays or from shooting in Scotland, could go to the works manager, who was on the job. It is a very good principle. He could tell the works manager what the grievance was, and the works manager could have it settled. That was the idea.

It worked very well, and in the main it works very well now. The principle of shop stewardship is a good one. It helps industry to run and oils the machinery. It smothers grievances before they develop into something big and ugly. But our Communist friends saw, from their point of view, the value of getting their own chaps into key jobs such as shop stewards. Not all shop stewards are Communists; the whole thing works wonderfully well in industry and most employers would not give up the system of having good, sensible shop stewards on the job. But there is a minority, in certain industries a powerful minority, of shop stewards who are Communists.

Do not misunderstand me; they do not try to mix up the works because they are Communists. Some of these Communist shop stewards are excellent trade unionists. They do their job and do not put a foot wrong. If some of the non-Communists in our trade union movement were as zealous and as enthusiastic in working in their own unions as are the Communists, there would be no such thing as Communism in the British trade union movement. We must keep a sense of perspective and clarity of mind.

But the Communist shop steward, when he has his instructions from somebody above him, can cause and often does cause a great deal of commotion and trouble. With those few exceptions, where the Communist shop steward abuses his job because he is instructed to follow Communist policy—mainly in the docks, in Smithfield Market, and some other industries—the system of shop stewards is good. It is a commonsense vehicle or connecting link between the men on the job and the foreman or works manager.

MAJOR S. J. LEWIS: I should like to ask two questions which are quite unrelated. I should like to frame the first against the background of the recent London bus strike. It was widely said in the course of all that was written about that strike—and I believe it to be so—that the majority of the bus drivers did not want to strike. They were brought out on strike, against the wishes of the majority, by their leadership. If that is so, does it follow that the normal democratic processes did not work in this case? Should there be therefore—a thesis on this was recently developed in a paper produced by one of the Inns—a right not to strike?

Secondly, may I ask a question against the background of the Longbridge dispute in 1956? It was stated that the management was very seriously at fault, and when the strike was eventually settled we heard such things as, "This must never happen again. There must be consultation." To the best of my knowledge that sort of strike—about redundancy—has not happened again.

In the famous—one might say infamous—"who shall drill the holes" dispute, there was an obvious lesson; a line of demarcation was patently necessary. Yet consistently since then we have seen exactly the same sort of dispute. Today we have the problem in Cammell Laird, "who shall use this particular piece of equipment?" Does not that point the need to education, leadership, and guidance from the T.U.C. or from within the individual unions?

First, should there be a right not to strike; and, secondly, are the T.U.C. and the individual unions doing all they could and should in the way of leadership and education?

THE LECTURER: It is not correct to say that the bus drivers and conductors in the recent London bus strike were pulled out on strike by the scruff of the neck by Frank Cousins or his colleagues. I say this very clearly: in my nearly 40 years' experience of the trade union movement, no man ever tried to avert a strike as Frank Cousins tried to

avert the bus strike. Even if I disliked him personally—which I do not—I should have to say that in the interests of the truth and knowing the subject from the inside. He turned and twisted like a contortionist to avert that strike. The bus drivers themselves were unanimous in wanting to strike. They forced the pace. When they came to the T.U.C. and we offered our services in conciliation with Sir Brian Robertson and the Ministry of Labour, it was the bus drivers themselves, by their ballots at the garages, who refused to go back to work even when advised by their own leaders to do so. Whatever we may think of the operation of the strike or of the inconvenience caused, I must tell you—and I cannot be called an extremist, although I am an extremist for the truth—that the bus drivers and conductors of London—there may have been one or two exceptions here and there—were determined to go on strike and they forced the pace. It is not true that Frank Cousins or his Committee or his Executive pulled them out.

The other question is a little more important. You mentioned education. You know, we are all human beings, we are all members of the Commonwealth family. There are times when we can all act stupidly. I have no monopoly of stupidity. There are many things I do which are stupid. Sometimes I know about them. I do many things stupidly in public where, as a public man, you attract attention. From time to time we all act stupidly, whether at home or outside. Certain trade unions can act stupidly, for instance about the holes and rivets in Liverpool. I was on the committee that settled that trouble. That was one of the instances of stupidity. There was no reason or justification and no logic attached to it. There was no grievance. There was no wage demand. There was no principle involved. The employers were not putting the screw on. It was simply one of those stupid things which just happen. That did not excuse it, because it caused a lot of trouble and inconvenience. When we have these demarcation problems, such as that at Cammell Laird, they are not all stupid, however. Some are based on pride of craft. Many of these demarcation disputes have deep roots in pride of craft. The craftsman feels that it is his job; he is thinking not as a trade unionist but as a craftsman. It is his job and he will let no one else do it.

But in modern industry certain things must go by the board. There are certain processes which cannot be defined as this man's job or that man's job. The trade unions are using education. Each trade union has summer schools and week-end schools, bringing the shop stewards and branch secretaries together and teaching them the background to trade unionism. The T.U.C. is spending a lot of money every year in educating the men on the floor into the modern idea of interpreting the old trade union principles. We cannot live in the past; we must go back to the past only to get from it what is good for the future. We are trying to teach our union officials, the branch secretaries and those who influence the men on the job, how to apply old trade union principles to modern society and modern needs.

ADMIRAL OF THE FLEET SIR ARTHUR POWER: I entirely agree that the vast majority of trade unionists are good chaps; I suppose 95 per cent. are. Therein, I suggest, lies their weakness. Being good chaps, they cannot descend to the methods of the Communists. I once had the good fortune to discuss Communism with the late Ibn Saud, and he said, "You people in England will be troubled by Communism because you do not cut off their heads when you catch them." He added, "Don't ever forget that Communism is a filthy thing which creeps along just under the ground."

The great body of trade unionists are good chaps and they cannot descend to the level of the Communists. I suggest that one of the first responsibilities of the trade union leaders today is to lead their unions so as to destroy Communism, this filthy thing which creeps along under the ground. The majority of trade unionists cannot bring themselves to do this.

THE LECTURER: I think you are right about that. The vast majority of trade unionists are good fellows and do not play that game. There is a lot in what you say, but it is difficult to solve the problem in that way. Sometimes the means of solving a problem can be worse than the problem itself, or it may throw up other problems. If we adopted

that militant method no doubt we should succeed in eliminating Communists in a short time, but it might create other problems.

I think that the ordinary horse sense of the individual trade unionist will win the day in the end. There are other ways of killing a pig than cutting its throat. But in certain circumstances, into which I will not enter, we do what you suggest: we get tough, but we do it in a way which we cannot reveal. There are circumstances in which we get tough, and with great success.

LIEUT.-COLONEL K. G. LIVINGSTONE: Would it not be fair and just, and would it not, incidentally, strengthen the influence of labour leaders in maintaining discipline, if when an unofficial strike occurs, that is to say, when members of the union break their contracts made by their elected leaders, the funds of the union were made liable to pay damages?

THE LECTURER: Successive governments have had to cope with the problem of the development of trade unions, which have grown over 100 years to their present state. You can imagine that during this process there have been difficulties. At the start it was an illegal organization. Lord Melbourne sent those workers to Botany Bay. The trade unions were outlawed. The trade unionists were regarded as conspirators. It was only in the later part of the last century that an amendment was moved to the Conspiracy Act to prevent people who joined trade unions from being arraigned as conspirators.

There have been three important Acts of Parliament. I mentioned the 1906 Act, which legalized strikes. Before the passing of that Act a striker was in breach of contract with the employer. It was a tort, an actionable event in court. Each trade unionist and the trade union executive could be sued for heavy damages for breach of contract. The 1906 Act relieved the trade unions of the legal consequences of that action.

In 1913 the finances of trade unions were ordered and organized so that if anyone wanted to contribute to a political fund he could do so, but anyone had the right to contract out and to state that he did not want any part of his contribution to go to a political fund. The Act of 1925 provided that union funds could not be used to meet damages in respect of the legitimate functions of a trade union. There was the right to strike and to pay out strike pay, sickness, and death benefits.

All these are privileges and concessions—they are not natural rights—given to trade unions by successive governments. The funds of a union cannot be sued for damages in these matters, but a trade union can be sued for libel and the individual members can be sued for libel or slander. They can be sued for individual actions, such as offences against an employer outside industrial matters. In such matters the trade union can be sued as a whole, or as separate individuals, and its funds can be used if an order is made that they should pay damages. But outside that, trade union funds are protected from being sued, by various Acts of Parliament.

LIEUT.-COLONEL LIVINGSTONE: I asked whether that was fair and whether it would not strengthen the influence of labour leaders if they could say to their members, "If you strike, if you break your contract, do not forget that they will have a crack at our funds."?

THE LECTURER: That could be helpful, but I do not think the actions of a noisy minority from time to time would warrant legislation being introduced which would be effective in placing the whole of the trade union movement in that position. I think that the leaders can persuade their followers without having to fall back on threats that the funds would be mulcted for damages.

If there were a serious spate of continual breaches of contract by trade unions, every day of the week, which undermined the economy of the country seriously, no doubt any government would begin to consider the introduction of legislation adverse to trade unions, possibly on the lines you suggest, but in spite of the few wild-cat strikes that we have had, I do not think the circumstances in Britain would justify a law involving the trade union funds in that way. I do not think the trade union leaders would welcome it. We can

persuade our members not to take certain actions without saying that our funds will have to meet heavy damages. Although there is a good deal of merit in the point you make, the circumstances do not justify the introduction of that kind of legislation.

BRIGADIER J. STEPHENSON : There is one question which the lecturer did not answer, has an employee the right not to strike ? May I put it in a different way ? Would it not be better, particularly with unofficial strikes, to hold a secret ballot to see whether the men want to go on strike ? It would at least stop men from being 'sent to Coventry.' The lecturer wants to retain arbitration. He may be right. But does he agree that both sides should be rigorously bound by the award of the arbitration court ?

THE LECTURER : We are bound by the decision of the arbitration tribunal. You are probably confusing the arbitration tribunal with the court of inquiry, such as happened in the bus strike and on one or two other occasions. Neither the employers nor the trade union are necessarily bound by the decision or recommendation of a court of inquiry ; they can reject or accept it. But if you take a case to arbitration to the Industrial Disputes Tribunal, both sides are compelled to accept the decision.

BRIGADIER STEPHENSON : Is it always observed ?

THE LECTURER : Yes. I know of no case in which a trade union or the employers' organization, or employers, have not carried out the decision of the Industrial Disputes Tribunal.

BRIGADIER STEPHENSON : The unions can still strike.

THE LECTURER : Yes. But they very rarely do. I do not know of an instance where a strike has followed a decision of the Tribunal. That is why I deplored the Minister's decision. I do not understand why he has taken it. We shall take the matter up in the House of Commons and see what we can do there.

Of course a worker has the right not to strike ; that has never been disputed. If a person wants to stay at work, there is no legal impediment to prevent him. I know of no official strike these days which is not called only as a last resort, after every other avenue has been explored, and in practice it is very rare for members of a trade union to refuse to obey an official strike call. They come out, but they have the right not to come out. There was a recent unofficial strike in Yorkshire, called quite unofficially by a body of men without union recognition. The majority of men stayed at work. The principle of their having the right not to strike has never been disputed.

There is nothing wrong about a secret ballot to authorize a strike ; there is a lot to be said for having a ballot before a strike. The difficulty is that if you agree to the principle of a secret ballot to authorize a strike, you must have a ballot to call off a strike ; you cannot have it both ways. I am talking of an official strike ; this does not arise with an unofficial strike.

If the Executive have not the authority to authorize a strike, without a ballot of members, they have not the authority to call off a strike. It takes the best part of a fortnight, and in some industries more, for the ballot boxes to be taken round ; it depends on the machinery of the union and the industry in which it operates. Most strikes are settled around the table ; that is why strikes are not necessary these days, for the proper machinery is there to avoid them. In the end you have to meet around a table, only after a strike you meet with bitterness. If they meet the employers around a table and reach a compromise, the leaders today can say, "We will go back to work," but if they had to conduct a ballot it might take ten days or a fortnight to call off the strike. That is why the T.U.C. do not favour a secret ballot before a strike. There is nothing wrong in the principle and there is a lot to be said for it, but in the long run, in the few official strikes that we have, it would be a disadvantage to industry to have a ballot if it entails another ballot to call off the strike.

BRIGADIER STEPHENSON : And an unofficial strike ?

THE LECTURER : In an unofficial strike the question of a secret ballot does not arise, because it is called by the men in breach of their union rules and in breach of their union's

agreement. An unofficial strike is invariably condemned by the union and in the end it fails. The object of an unofficial strike is never achieved ; it causes a lot of trouble, but the object which the men have in view—or they are misled that that is the object—is never achieved. I know of no employer who will give way under pressure from an unofficial strike. If employers did, there would be constant and continuous anarchy in industry.

THE CHAIRMAN : We have kept Sir Tom a long time, and I hope that the nature of the questions has shown him the great interest we have in the subject. He has given us not only a clear but a living picture of trade unionism and how it came about to counter the bad working conditions, the low pay, and the long working hours which followed the Industrial Revolution. He has shown how, through the history of British trade unionism, there has been built up something which is a strength to industry.

I am very glad that he has pointed out three things in particular ; first, the need to fight Communism in the trade unions ; secondly, that the noisy minority should not take our eye off the great majority of the 9,000,000 trade unionists who get on with their jobs quietly and efficiently ; and thirdly, that the object of trade unionism is not political but is to ensure the best living and working conditions and, through that, incidentally, the greatest prosperity for British industry.

In his memoirs Field-Marshal Montgomery writes, " the raw material with which a general has to deal is men." That is also true in civil life. Managers of large industrial concerns have not always seemed to me to understand this. They think that their raw material is iron ore or cotton or rubber—not men but commodities. This is a problem which anyone in industry must keep in front of his mind. It seems to me that we in the Services can help.

I have explained to Sir Tom that his talk and the discussion will be reported in the JOURNAL, which is sent all over the world. It is read not only by those who will continue in the Services but also by a large number of officers who will be passing into civilian life in the next two or three years, with many years of useful work still before them. It is important that they should understand this problem, because one of the things on which we might congratulate ourselves is that during our Service careers we have learned and understood something about man management. I know that such experience, taken by the ex-officer into his new industrial and commercial life, can be of great value to industry—I will not say both sides of industry, because in my opinion there are not two sides but one team of management and workers working together. We are therefore particularly indebted to Sir Tom for coming here today.

THE LECTURER : Thank you very much. Thank you for inviting me. It shows that the Institution has served a great purpose in our daily lives, for you, as retired officers, and some of you still in the Services, are prepared from time to time to spend an hour or two listening to speakers on various subjects and to include among those subjects that which I have tried, perhaps inadequately, to put before you. I am glad that the Chairman said there ought to be no such thing as two sides of industry. We have got away from the master and servant complex. We have got away from the time when the factory gate carried the notice, " No hands wanted." The psychology of the approach has been changed entirely. If we can look upon industry not as one side or the other but as a team, that psychological approach will solve many of our other problems.

ADMIRAL OF THE FLEET SIR ARTHUR POWER : May I thank General Lyne for taking the Chair through what has been a very instructive one-and-a-half hours ? (*Applause.*)



THE ANATOMY OF DETERRENCE

By BERNARD BRODIE

[Published by permission of "World Politics" of Princeton, New Jersey. It should be realized that in this article 'we' and 'our' refer to the United States.—EDITOR.]

FROM the American point of view the strategy of deterrence, and the related principle of limiting to tolerable proportions whatever conflicts become inevitable, tend to spring from the premise that the favourable results of a total war can never be sufficient to justify its cost. Such a war, according to that conception, would be too big, too all-consuming to permit the survival even of those final values, like personal freedom, for which alone one could think of waging it.

The conceptions of deterrence and of limited war also take account of the fact that the United States is, and has long been, a "*status quo*" power. It is uninterested in acquiring new territories or areas of influence or in accepting great hazard in order to rescue or reform those areas of the world which now have political systems radically different from its own. On the other hand, as a *status quo* power it is also determined to keep what it has, including existence in a world of which half or more is friendly or at least not sharply and perennially hostile. In other words, the minimum security objectives for the United States must include not only its own national independence but also that of other countries which presently have and cherish such independence, especially those which enjoy democratic political institutions comparable to its own.

The policy which seeks to protect all it has has been called the policy or strategy of 'containment.' The conception of containment has been abused by those who would presumably do more rather than less, but the policy of doing more seems quite unable to generate any real dynamism behind it. The reason is that the moment something specific is suggested, one has to take account of attendant risks.

The philosophy of deterrence also takes account of the enormous American cultural resistances to hitting first in a period of threatened total war. That is not to say that it is out of the question that we should do so. It is possible that we will build so much automaticity and sensitivity into our retaliatory response that it could be triggered by an indication of hostile intent rather than a hostile act. Such a development would probably be attributable more to absent-mindedness on the part of our political leaders than to design, but such absent-mindedness is commonplace in peacetime in the area of strategic decision. Also, we must not forget that there is likely to be a threshold of intolerable provocation short of direct attack upon us, even though we cannot determine before the event where that threshold is or ought to be.

Nevertheless, it remains unlikely that our Government will ever deliberately initiate a total war for the sake of securing to ourselves the military advantage of the first blow, however considerable that advantage may be. The operational corollary of that point is that we must do what we can to reduce the advantage that might accrue to the enemy if he hits first. The planners' willingness to spend large sums on

achieving the last-mentioned objective provides a good check on whether a strategy of deterrence is seriously intended and internally consistent. Because budgets are always limited, a readiness to spend money on the security of the retaliatory force argues willingness to do without the extra bombers and missiles that that money could otherwise buy.

DETERRENCE OLD AND NEW

Deterrence as an element in national strategy or diplomacy is certainly nothing new under the sun. However, since the development of nuclear weapons, the term has acquired not only a special emphasis but also a distinctive connotation. It is usually the new and distinctive connotation that we have in mind when we speak nowadays of the strategy of deterrence.

The threat of war, open or implied, has always been an instrument of diplomacy by which one State deterred another from doing something of a military or political nature which the former did not wish the latter to do. Frequently the threat was completely latent, that is, the position of the monitoring State was so obvious and so strong that no one thought of challenging it. Governments, like men generally, usually have been aware of the hazards involved in provoking powerful neighbours, and have governed themselves accordingly. Because avoidance not only of wars but even of crises hardly makes good copy for historians, we may infer that the past successes of some nations in deterring unwanted action by other nations add up to much more than one would gather from a casual reading of history. Nevertheless, the very large number of wars that have occurred in modern times proves that the threat to use force, even what sometimes looked like superior force, has often failed to deter.

We should, however, notice the positive function played by the failures. The very frequency with which wars occurred contributed importantly to the credibility inherent in any threat. In diplomatic correspondence, the statement that a specified kind of conduct would be deemed 'an unfriendly act' was regarded as tantamount to an ultimatum and to be taken without question as seriously intended.

Bluffing, in the sense of deliberately trying to sound more determined or bellicose than one actually felt, was by no means as common a phenomenon in diplomacy as latter-day journalistic interpretations of events would have one believe. In any case it tended to be confined to the more implicit kinds of threat. In short, the operation of deterrence was dynamic; it acquired relevance and strength from its failures as well as its successes.

However, the policy of deterrence that we are talking about today is markedly different in several respects. For one thing, it uses a kind of threat which we feel must be absolutely effective, allowing for no breakdowns ever. The sanction is, to say the least, not designed for repeating action. One use of it will be fatally too many.

We thus have the anomaly that deterrence is meaningful as a strategic policy only when we are fairly confident that the retaliatory instrument upon which it relies will not be called upon to function at all. And that instrument, if we are to be sure of its not being used, has to have its capacity to function maintained at a very high level and constantly refined—which can be done only at great cost to the community and great dedication on the part of the personnel directly involved. We are, in other words, expecting the system to be constantly perfected while going permanently unused. Surely we must concede that there is something unreal about it all.

THE PROBLEM OF CREDIBILITY

Even so, the unreality is minimal when we are talking about what we shall henceforward call 'basic deterrence,' that is, deterrence of direct, strategic, nuclear attack upon targets within the home territories of the United States. In that instance there is little or no problem of credibility as concerns our reactions. The enemy has little reason to doubt that if he strikes us, we will certainly try to hit back.

But the great and terrible apparatus which we must set up to fulfil our needs for basic deterrence, and the state of readiness at which we have to maintain it, creates a condition of almost embarrassing availability of huge power. The problem of fitting this power into a reasonable conception of its utility has thus far proved a considerable strain. It was responsible at one time for our espousal of the doctrine of massive retaliation, which we have since rejected in theory but not entirely in commitment. One of the first things wrong with the doctrine of massive retaliation, where it has been meant as a response to less than massive aggression, is that the enemy with a nuclear capability of his own cannot believe that we mean it.

On the other hand, it would be tactically and factually wrong to assure the enemy in advance (as we tend to do by constantly assuring ourselves) that we would in no case take off against him until we had already felt some bombs on our cities and airfields. We have, for one thing, treaty obligations which forbid so far-reaching a commitment to restraint. It is also impossible for us to predict with absolute assurance our own behaviour in extremely tense and provocative circumstances. If we make a wrong prediction about ourselves, we also encourage the enemy to make a wrong prediction about us. The outbreak of war in Korea in 1950 followed that pattern. The wrong kind of prediction in the future could precipitate that total war which too many persons have lightly concluded is now impossible.

DETERRENCE STRATEGY VERSUS WIN-THE-WAR STRATEGIES :
THE SLIDING SCALE OF DETERRENCE

But let us return now to the simpler problem of basic deterrence. The capacity to deter is usually confused with the capacity to win a war. Assuming always that 'to win' has some useful meaning in a modern total war, we may be sure that it requires either a decisive and effective superiority in strategic air power (by effective we mean mostly available when needed, which may be after an enemy attack) or more likely some striking success of initiative. Inasmuch as effective superiority is always a good thing to have anyway if one can afford it, one sees that the confusion between deterring and winning has some method in it. But deterrence effect as such does not depend on superiority.

Prior to the nuclear age, a force which was clearly inferior to a rival's might or might not have some real deterrence value. Surely it is reasonable to surmise that if Stalin had had in late 1939 a better estimate of the capability of the Finns to defend themselves, he would have been much less ready to attack them. If we can deduce his incentive in attacking from the peace terms he ultimately laid down, it seems not to have been so much a desire to conquer and absorb some extra territories, let alone the whole Finnish nation, as it was the wish to administer to the Finns and to others a sharp lesson. That object was compromised by the successes of the Finnish resistance, despite their final defeat. What we wish to emphasize by this example is that deterrence has always suggested something relative, not absolute, and that its effectiveness must be measured not only by the amount of power that it holds in check, but also by the incentives to aggression residing behind that power. We can

easily see how truistic this point is when we recall that neither Mexico nor Canada needs military power to defend itself from the United States; but truistic or not, the point is implicitly denied by those who equate deterrence with capacity to win.

Now that we are in a nuclear age, the potential deterrence value of an admittedly inferior force may be sharply greater than it has ever been before. Let us assume that a menaced small nation could threaten the Soviet Union with only a single thermo-nuclear bomb, which, however, it could certainly deliver on Moscow if attacked. This retaliatory capability would be sufficient to give the Soviet Government much pause. Certainly they would not invoke the destruction of Moscow wantonly, that is, for trivial gains. If we think of five to ten H-bombs delivered on as many of the largest Soviet cities, the deterrence would no doubt be significantly greater—though we would still be far from talking about a force which is either superior or decisive to that of the Soviet Union.

If we attempt to plot a curve denoting 'deterrence effect' as a function of the numbers of thermo-nuclear weapons expected to fall on the aggressor's cities—with 'deterrence effect' measured along the ordinates and numbers of bombs given as abscissae—we can surmise that the curve begins at a rather high level of deterrence for the first such bomb, and that while it moves significantly higher as the number of bombs increases beyond one, it does so at a decreasing rate. At a relatively modest number (probably well short of 100) the curve is closely approaching the horizontal. The asymptote representing *maximum possible deterrence* which it is possible to reach with this kind of threat would very likely require something acknowledged to be 'decisive superiority' over the enemy, but it is likely also that very considerably less force would buy only trivially less deterrence.

That is not to say that for that reason we have no interest in 'win-the-war' capabilities and strategies. So long as there is a finite chance of war, we have to be interested in outcomes; and although all outcomes would be bad, some would be worse than others. Also, if we could imagine a conspicuous capability for winning wars which was able to survive even a surprise attack by the enemy, we should have to acknowledge the ultimate in deterrence.¹ But we have to be ready to recognize that deterrence philosophies and win-the-war philosophies may diverge in important respects. We can say in advance that they must diverge in terms of priority. The objective of erecting a high degree of deterrence takes a higher priority than the objective of assuring ourselves of a winning capability, if for no other reason than that there is bound to be a considerable difference between the two in feasibility and in costs. We are also likely to feel a divergence between the two philosophies when it comes to considering alternative military policies in terms of comparative degrees of provocativeness. For the sake of deterrence we want always to choose the less provocative of two policies, even if it may mean some sacrifice of efficiency. But if we were in fact interested primarily in winning and only secondarily in deterrence, we should be extremely loath to make any such sacrifices.

Let us be quite clear that the curve described in the penultimate paragraph above does *not* represent how decision-makers would react to a situation. It is most unlikely that a particular point in the scale of estimated counter-blows would represent for

¹ Provided it was coupled also with the threat of very large damage. Historically it has *not* been true that nations always regarded ultimate military defeat as more serious than very heavy damage. Defeat has often been accepted in order to avoid such damage, even where victory was far from hopeless. If that were not so, there would be very little hope for limiting war.

them in any firm, objective way, the dividing line between a 'go' and a 'no-go' decision. Human beings, differing widely as they do in temperamental and psychic make-up, simply do not make difficult and momentous decisions on that basis. Much more is left to what we have to call intuition. Nevertheless, the curve described above is useful for communicating the intelligence climate in which the decision is made.

We must notice also that when we talked about ultimate deterrence probably depending on decisive superiority, we were implying, for the first time in the discussion, a *comparison* in the degree of damage likely to be suffered by each side. Prior to this point we were talking of deterrence as something resulting from a *unilateral* consideration of damage, that is, an estimate of the damage likely to be suffered by oneself. This is the issue that seems to provoke so much confusion about deterrence. It is a truistic statement that by deterrence we mean obliging the opponent to consider, in an environment of great uncertainty, the probable cost to him of attacking us against the expected gain thereof. It is only a shade less obvious that the cost has to be measured in terms of damage to himself. But what seems very difficult to grasp is that his gain cannot be measured simply in terms of damage to us (or vice versa) even though such damage may indeed provoke an act or condition (i.e., surrender or military obliteration) which he legitimately considers a gain if only because it terminates a threat. But damage to an opponent, however large, which for one reason or another fails to have such an effect is no gain at all.

To be willing to accept enormous destruction only for the sake of inflicting greater destruction on the enemy (which may be all that some mean by 'winning') argues a kind of desperation at the moment of decision which rules out reason. We may have to expect that at certain extreme conditions of provocation (e.g., conviction that an enemy attack upon oneself is imminent) the deterrent posture will tend to collapse or be discarded without much regard to estimates of damage or of gain to either side. But all that means is that the rationality upon which deterrence must be based is ultimately frangible—a conclusion of which history has already given us ample indication.

Another attitude that gets in the way of understanding deterrence is the one which alleges that Soviet leaders, when faced with issues of peace and war, would be indifferent to the loss of individual cities and certainly of the populations (as distinguished from the production capital) within those cities. The implication of this view is that a government or leadership imbued with that kind of indifference can be deterred not by considerations of loss in any graduated sense of the term, but only by the prospect of *losing a war*. This is hardly the place to attempt to weigh the evidence for and against such an attribution of indifference. But as this writer sees it, the view just described grossly distorts and exaggerates some undeniable and important differences between the Soviet system and our own.

Certainly insensibility to human suffering among subject populations, especially when it can be rationalized as a necessary price for alleged future benefits, is much more characteristic of the Soviet system than of our own. This fact probably affects significantly the dynamics of deterrence as described in preceding paragraphs. But it is not enough to subvert those dynamics. The Soviet leaders might be appreciably less shocked and distressed than our own leaders would be in comparable circumstances by the loss through nuclear bombing of one or more of their large cities, but they certainly would not be indifferent to it—either on humanitarian or prestige grounds.

Of course, we have to remember that the Soviets have a very high incentive for destroying us, or at least our military power, if they can do so—at minimum the

incentive of eliminating what is to them a great threat. As we emphasized earlier, the question of incentive is decidedly relevant to the issue of deterrence. In fact, deterrence is simply the effort to erect appropriate disincentives to counteract the incentives which the opponent feels for our destruction, disincentives which not only guarantee him pain if he attempts to attack us but also heighten his uncertainty of ultimate accomplishment from so doing.

To return now to our conception of a 'deterrence effect' curve—for which we cannot, of course, fill in specific values—we may now consider how it assists us in formulating our strategic problems.

First, it should be obvious that what counts in basic deterrence is not so much the size and efficiency of one's striking force before it is hit as the size and condition to which the enemy thinks he can reduce it by a surprise attack—as well as his confidence in the correctness of his predictions.² However, to many who are in one way or another charged with military planning, that point is not at all obvious. The reasons for their rejecting it may vary. Some are simply unused to thinking in terms of the enemy having the initiative, preferring always to think in terms of our having it. This is an age-old addiction of official war planners. Others, more sophisticated, apparently feel that a force that lets itself take the first blow will not be strong enough to win a war, regardless of what it has done to protect itself, and they are by training, tradition, and often temperament interested only in strategies that can win. They are preoccupied with getting the offensive force launched against the enemy while it is still able to win—i.e., *before* it is hit. They are either not interested in a predominantly deterrence strategy, or they are convinced that a force not strong enough to win is not strong enough to deter. Underlying this view is also the conviction that money spent on protecting the retaliatory force might otherwise have been spent on expanding it.

The latter conviction is certainly correct. The same kind of problem, of deciding how much it is worth paying to design protection into an offensive force, has been faced many times before, notably in the history of warship development. Armour on warships has always been expensive and has also absorbed a great deal of the weight-carrying capacity of the ship. So later did anti-aircraft armament. The initial bias of the users has usually been against sacrificing offensive for defensive armament (to quote a slogan of the U.S. Navy prior to our entry into the second World War), but battle experience would finally intervene to force the necessary adjustment. Each new category of weapons seems to require the same kind of adjustment through the same kind of contact with experience. Perhaps the fact that thermo-nuclear weapons have made it possible, for the first time, to conceive of having more offensive power than we really need will make it easier to shift emphasis from buying more and better bombers and missiles to buying more and better protection for bombers and missiles. In any case, the overriding considerations should be that *the nation is committed primarily to a deterrence policy*, and that such a commitment dictates concern with the survival of a retaliatory force of reasonable size following enemy attack.

If it were possible to guarantee the survival of a hard-core retaliatory force of reasonable size by protecting massively in individual shelters, even at very

² The pre-hostilities size of one's retaliatory force does have a distinctive and possibly important deterrence effect because of the enemy's concern with what it will mean for him if his attempt to destroy it by surprise attack should fail utterly. Of course, he may grossly misestimate, in either direction, the chance of failure.

high unit cost, a pre-selected portion of one's entire retaliatory force, that would be the way to go about it. The rest of the force could do with less massive protection on the grounds that the worst imaginable contingencies are not the only likely ones, and may not even be the most probable ones. However, in view of the cratering effects of large thermo-nuclear weapons exploded at ground level, and considering also the accuracy of delivery at least of manned bomber aircraft, it is difficult to imagine a shelter which had been singled out for attack being strong enough to withstand that attack. Obviously, a much larger proportion of one's total striking force, and preferably the whole of it, has to be given a high level of protection—as well as dispersion and concealment—to make it likely that a reasonable proportion of it will survive. Such a procedure also ensures that the enemy, if he comes at all, has to come in large force, which greatly diminishes his chances for surprise.

The principle of a sliding scale of protection could conceivably be applied in other ways. One way would be to have a proportion of the total force always in flight, fully armed, with tankers in attendance, and another portion kept in very advanced readiness. The U.S. Air Force has indicated, in numerous public pronouncements, its interest in dealing with the problem of vulnerability by such means. But such a system is exceedingly expensive, enough so to force reconsideration of the shelter system suggested above. Also, it is much more provocative to the opponent. And as far as advanced readiness is concerned, it has considerable value against manned aircraft attacks, but little or none against missile attacks.

From the security point of view there is also value in diversification for the hard-core survival forces. For example, the use of nuclear-powered submarines as a means of hurling nuclear missiles of the Polaris type against strategic targets would seem to be a desirable supplement to a well-protected, land-based force, even if it proved to be (which is by no means presently established) a costlier method measured by effects achieved at targets. The submarine is free of that main defect which characterizes the aircraft-carrier, its relatively easy detectability by airborne radar combined with high vulnerability to atomic attack.

DETERRENCE AND THE CHOICE OF BOMBING VEHICLES : MISSILES VERSUS AIRCRAFT

We have thus far stressed the necessity for deterrence purposes of providing for a retaliatory force which will survive surprise attack. But the surviving force must also appear to have a good chance of penetrating fully alerted enemy defences, even if launched in relatively small numbers. This requirement affects the choice of vehicles for the hard 'deterrence core' of the retaliatory striking force. It undoubtedly upgrades, for example, the value of the long-range ballistic missile as compared with the manned aircraft.

If the ballistic missile is compared with the manned aircraft on any grounds other than penetration capability, the latter appears able easily to hold its own for some time into the future. The airplane can carry heavier and therefore (for the present) more powerful thermo-nuclear weapons, and it can deliver them more accurately than the missile. It can be protected on the ground through the use of a heavy shelter at least as easily as can the larger and more delicately constructed missile. The aircraft which takes to the air frequently can be more reliably depended upon to do so at the moment of need and, in cases of most advanced readiness, probably with a shorter preparation and check-out time than the never-previously flown missile. In addition, the aircraft has the special factor of

'recallability,' the capability of being sent out at inconclusive warning of enemy attack—thus getting it off the ground into the safer air—subject to being recalled within a reasonable period of time if the warning turns out to be false. This factor of 'recallability' has been considered especially valuable to the advanced-readiness force. If one did not have to think about enemy active air defences, the aircraft would probably also be a cheaper way of assuring a given amount of target destruction, especially where the targets are other than cities and where accurate aiming is required.

However, the speed of the missile not only denies the victim appreciable warning time, but also makes the problem of coping with it through active defences extraordinarily difficult, even if not altogether hopeless. An anti-missile missile is probably feasible, but to design into it the requisite sensitivity and quickness of reaction, and at the same time immunity to deceptive signals, is going to be anything but easy.³ The problem of destroying missiles in flight is incomparably more difficult than that of destroying aircraft, and we are very far yet from being in an era when it is a simple matter to destroy enemy manned bombers in flight.

The conclusion is unavoidable that for some time to come the ideal strategic bombing force will be a mixed missile and manned-aircraft force. But because of the penetration problem, which is bound to be much more difficult in a counter-attack than in a surprise initial attack and which will go up disproportionately in difficulty as the number of attacking vehicles diminishes (except where the numbers are kept small in an initial attack for the sake of surprise), one should expect that the missile will be favoured in the 'hard-core' of the retaliatory force.

THE PROBLEM OF TARGET CHOICE IN RETALIATION

The U.S. Air Force has thoroughly acquainted the public with the information that our individual Strategic Air Command (S.A.C.) crews are thoroughly briefed on specific primary and alternative targets for their initial D-day strike. It has also made clear in recent years, since the Soviets have achieved a nuclear bombing capability, that while the ultimate strategic target remains the enemy 'war economy' (whatever that may mean under thermo-nuclear conditions where the conventional materials of warfare are almost certainly meaningless), first priority has to be given to his strategic air force.

But such a priority clearly applies only to an attack in which we hit first. All the major conditions governing target selection may change if the enemy strikes us first and ours is a retaliatory mission. In the first place, our retaliatory force is smaller by some unknown though very likely substantial factor than the original offensive force. This smaller force, which is probably much disorganized, will now have to attempt to penetrate fully alerted defences. The enemy air force (including missiles) is no longer at rest at its bases, ready to be struck by us to maximum effect. Its attractiveness as a strategic target had begun to decline sharply from the moment its own attack began to be airborne.

³ As something to be mounted and maintained during peacetime, an anti-missile missile defence poses problems which are probably much more severe on the political than on the technological side. Active anti-missile defence probably makes no sense unless it is highly sensitive and fully automatic, and it is precisely these characteristics which are politically objectionable in peacetime, especially for any system which utilizes nuclear weapons.

Moreover, depending on the degree of surprise it achieved, it has already done a good part of its total work, certainly the major part so far as one's own air force is concerned.

What then happens to the priority of the counter-air mission? The enemy air force has ceased to be anything like so profitable a target as it was prior to hostilities, and at the same time our capabilities for hitting it have been reduced markedly. They may have been reduced below the critical limits at which we can no longer injure his surviving air power appreciably. We can probably always prevent some enemy planes from flying second and third missions even if we have been too late to stop the first. That opportunity is not to be dismissed lightly. But it may not seem like a meaningful way to use up our surviving strike capability, especially if that capability is considerably reduced from the original.

What then? Perhaps we will have succeeded in putting enough target flexibility into our system so that surviving units do not simply go charging off against originally assigned targets. Even if it were a rational decision not to change the identity of the top-priority target system, certainly a substantial loss of planes, and hence reduction in the number making the counter-attack, argues that individual targets must be reassigned to avoid serious *lacunae*. But we also have to reconsider the whole system.

If we consider the problem strictly from the point of view of achieving *before* hostilities the maximum deterrent effect for our retaliatory force, the answer seems to be simple. We assign to the hard-core elements in our retaliatory force the enemy's major cities, provide for the maximum automaticity as well as certainty of response, and lose no opportunity to let the enemy know that we have done these things. The enemy therefore has reason to calculate that even a very great success against our air force in a surprise attack will, so long as it is short of 100 per cent. success, result in his losing a number of his largest cities. Certainly he cares intrinsically more for those cities than he does for his airfields, especially after the latter have already done their offensive work.

Such an arrangement must surely maximize the deterrent effort of our retaliatory force. We assure the enemy, through assuring ourselves, that we will not reconsider the matter in the event of his attacking us. We will hit back with all our surviving power at his cities and, especially if that surviving power contains a fair number of missiles, he can count on losing those cities. It ought not to be too difficult to assure him that, come what may, he will lose 50 or more of his largest cities.

The rub comes from the fact that what looks like the most rational *deterrence* policy involves commitment to a strategy of response which, if we ever had to execute it, might then look very foolish. And the strategy of deterrence ought always to envisage the possibility of deterrence failing.

Suppose, for illustration, we imagine a kind of enemy attack that is far from implausible—in fact, one that has already been publicly proposed as a strategy we might adopt for ourselves if we ever initiated the attack.⁴ Suppose the enemy attacked our retaliatory forces with great power but took scrupulous care to avoid major injury to our cities. He might indeed understand that in a thermo-nuclear war the *ability* to destroy cities confers more military advantage as a threat than the actual destruction of them is likely to have. If his attack is to any serious degree successful, we should then be left with a severely truncated retaliatory force while his

⁴ See especially Colonel Richard S. Leghorn, "No Need to Bomb Cities to Win War," *U.S. News and World Report*, v. 38 (January 28, 1955), pp. 79-94.

remained relatively intact. That hardly seems like a propitious set of circumstances for us to *initiate* an exchange of city destruction, which under such circumstances becomes mere suicidal vindictiveness.

Thus it is easy to imagine a situation where it is useless to attack the enemy's airfields and disastrous as well as futile to attack his cities. No doubt we would in our rage and helplessness strike blindly at enemy cities, and no doubt also the enemy's anticipation of such irrational behaviour would help to deter him from precipitating such a situation. Perhaps for the sake of maximizing deterrence it is wise deliberately to reject the Napoleonic maxim "*on s'engage ; puis on voit*"—which after all applied to a state of affairs where one had far greater control of events after engaging than would be true of modern total war. If that is the conclusion, then the response ought to be not only automatic but sensibly so, that is, automatic against the things that hurt the enemy the most—cities rather than airfields.

But a reasonable opposing view is that however difficult it may be to retain control of events in nuclear total war, one ought never deliberately to abandon control. If so, how should we cope with an enemy offensive which exercised the kind of discriminating restraint described above? Clearly one cannot dismiss such restraint on the ground that it represents an unwise strategy. The contrary is probably true. The question is whether men who have been reared on the tradition which holds that extra damage from a delivered bomb is always a 'bonus'—a tradition which is probably as strong on the Soviet side of the military fence as it is on our own—are likely to approach the problem in so dangerously fresh a manner.

CHOICE OF WEAPONS FOR MAXIMUM DETERRENCE

The first underwater shot of a nuclear weapon, the 'Baker' shot at Bikini in 1946, revealed the appalling extent of radioactive debris which resulted from the explosion of a nuclear weapon, even one which by present standards was quite small. For a while it was possible to ignore this result because succeeding shots were set off, as a rule, from atop towers more than 200 feet high. However, the 'Bravo' shot in the CASTLE series on 1st March, 1954, involved a large thermo-nuclear weapon set off at ground level—putting so powerful a weapon atop the usual tower would have made little difference because of the size of the fireball—and the enormous reach of the fall-out on that occasion confirmed the existence of a tremendous lethal by-product.

It is fair to say that the military would have been happy to do without this radioactive by-product. Not only is its fall not subject to control in the general region of the target, but in wartime some of it is bound to fall on neutral or friendly countries, and even to drift back to the territories of the users of the bomb. That is especially true of the long-lived, insidious soil contaminant, Strontium 90.

For those reasons a great deal of research has gone into producing a so-called 'clean' bomb, that is, a thermo-nuclear weapon which relative to its explosive force in blast and thermal effects will produce only a slight amount of radioactive fall-out. It has, of course, been well known that the opposite course was also feasible, that by adding various chemicals one could produce a weapon which released a much greater amount of radioactive fall-out for its size than the already quite dirty thermo-nuclear weapon of the CASTLE-Bravo type. However, development of such super-dirty weapons was bound to be retarded by the feeling that they had little or no military utility and hence could not be morally justified.

But when we consider the special requirements of deterrence in the minimal or basic sense of deterring a direct attack upon oneself, a case for the super-dirty bomb becomes apparent. Since the emphasis has to be on making certain that the enemy has to fear even the smallest number of bombs that might be sent in retaliation, one wants these bombs to be and thus to appear before the event as 'horrendous' as possible. This objective is greatly advanced by making the bomb super-dirty, which incidentally also makes accuracy of delivery relatively unimportant. No doubt it will also prove feasible by the appropriate selection of chemicals to augment close fall-out without increasing the output of those radioactive elements that are characteristically carried to a great distance.

DETERRENCE AND CIVIL DEFENCE⁵

We have observed that minimal or basic deterrence as we have defined it, that is, retaliation in direct reply to attack upon ourselves, involves little or no strain on credibility. The enemy knows that if he hits our cities we will hit back, if we can. The question is one of feasibility, not intention. We suspect also that such a statement holds good without regard to the state of our civil defences at the time.

However, we have already noticed one case where even in the event of direct attack upon our own territories, the character and spontaneity of our response may become slightly more doubtful. This is the case where the enemy hits us hard at our air and missile bases but takes care to minimize injury to our cities. It may be plausible to argue that in that moment of catastrophe we will be too insensitive to the discrimination he is practising to let our responses be affected by it, but at present we cannot be certain of that. This uncertainty introduces the consideration that perhaps our response will be affected by whether or not we have some shelters to put our people into.

The moment we think of deterrence in somewhat bolder terms, that is, as something to be practised concerning territories beyond our shores, the issue of whether or not we have provided reasonable protection to our population may become all-important. We may be quite sure we will hit back if hit directly ourselves, but will we do so if any of our chief allies is attacked or threatened with attack? We are, to be sure, legally committed to respond with all our power and our leaders may presently be convinced that if occasion should arise they would honour that commitment. But surely they would on such an occasion be much affected by the consideration—assuming no radical change from the present situation—that our people are hopelessly exposed to enemy counter-attack.

We cannot predict for any specific instance that having the appropriate shelters would make a great difference in our behaviour. We could be cowardly with shelters and bold (or reckless?) without them; but surely if they existed at the moment of crisis, their effect would tend to favour courageous rather than craven decision. We should note that in the kind of crisis situation we are hypothetically posing, the question of whether or not there will be enough warning to get people to the shelters in time does not greatly disturb us; we are assuming that our Government sends them there as a result not of enemy attack but of its own resolution to act. If we have to assume that we will certainly be hit first in a surprise attack, and that all important population centres will be included as targets in the first wave of the enemy

⁵ For most of the ideas in this section I am indebted to my Rand colleague, Mr. Herman Kahn.

attack, then there is clearly little use for shelters in those areas. But that is, after all, a fairly extreme and one-sided assumption.

It has been pointed out also that an adequate civil defence programme may prove an indispensable factor in keeping wars limited. The maintenance by the enemy of limitations acceptable to us depends on our willingness to retaliate in kind and in greater degree in the event of gross enemy violation—going as far as the full use of S.A.C. if need be. The enemy must also believe that we are ready to do so. Surely it would help to develop in ourselves the requisite willingness, and in the enemy the necessary credibility, if we had meanwhile provided some cover for our populations.

We are describing an area of crisis and of decision which may seem to be utterly improbable for the future. But most of the billions we are spending on the total-war aspect of national defence envisage situations which are, we hope, at least equally improbable. All our efforts are directed—at least we intend them to be directed—towards making such situations still more improbable. That is what national defence is all about in the thermo-nuclear age.

One does not, naturally, accord to civil defence the same level of priority that one accords to comparable measures for the defence of S.A.C. A *secure* retaliatory force is not only the *sine qua non* of deterrence and of national defence generally, but the one instrument which could conceivably make all other instruments designed for defence unnecessary. But prudence tells us that we need some backstops even to a secure S.A.C., and a well-designed shelter programme for civil defence appears to fill such a need.

One school of thought holds that it is necessary and feasible to protect not only our people but also the tools and materials required for national economic recovery within a reasonable period after the war. This view suggests that a nuclear war is not necessarily the end of the world for us, let alone all humanity, and that we need not settle for anything less than the capacity to protect and preserve under attack the economic basis for our great-power status. The sums required to purchase this capacity over a five- to ten-year period are, allegedly, not outlandishly huge. It is possible to purchase relatively cheaply, in caves and unused mines, a great deal of floor space for the storage or actual operation of essential production capital. Some of this space is held to be already competitive, on an economic basis, with comparable space above ground. Whether or not this apparently optimistic appraisal is true cannot be determined without a careful and detailed technical survey, such as we cannot pretend to carry on here. All we can urge now is that the whole subject deserves careful study, that at the very least protection of population must be seriously provided for, and that such protection can be reasonably justified on political and strategic as well as on humanitarian grounds.

Individuals may in fact reject this kind of thinking on the ground that they would rather take their chances with a hazardous future without seeing shelters being dug into the ground around them to provide, at best, a marginal kind of safety. The usual observation on the subject includes some reference to the general undesirability of life anyway following a thermo-nuclear war. Individuals are entitled to adopt such attitudes for themselves, and perhaps for their children as well, though they may be deceiving themselves about their feelings in a future crisis. Governments, on the other hand, have no moral right whatever to adopt cavalier attitudes about the value of individual survival.

DETERRENCE AND ARMAMENTS CONTROL

We come finally to the question of the political environment favouring the functioning of a deterrence strategy, especially with respect to the much-abused and belaboured subject of international control of armaments. There is a long and dismal history of confusion and frustration on this subject. Those who have been most passionate in urging disarmament have often refused to look unpleasant facts in the face; and on the other hand, the Government officials responsible for actual negotiations have usually been extremely rigid in their attitudes, tending to become more preoccupied with winning marginal and ephemeral advantages from the negotiations than in making real progress toward the presumed objective. There has also been a confusion concerning both the objective and the degree of risk warranted by that objective.

Here we can take up only the last point. One must first ask what degree of arms control is a reasonable or sensible objective. It seems by now abundantly clear that total nuclear disarmament is not a reasonable objective. Violation would be too easy, and the risks presented to the non-violator enormous. But it should also be obvious that the kind of bitter, relentless nuclear and missile armaments race that has been going on since the end of the second World War has its own intrinsic dangers. We could not view it with equanimity even if we remained confident (as we have not been since the first Sputnik) of our ability to keep ahead technologically for an indefinite period. Inasmuch as this race itself imposes the gravest risks, we ought not to look askance at measures for slowing or otherwise alleviating it simply because those measures themselves involve certain finite risks. In each case the risk has to be measured and weighed against the gain.

The kind of measures in which we ought to be especially interested are those which could seriously reduce on all sides the chances of achieving complete surprise in a strategic attack. Such a policy would be entirely compatible with our basic national commitment to a strategy of deterrence. The kinds of measures one thinks of first in this connection refer to such mutual inspection schemes as would enhance the chances of getting strategic warning (as opposed to the tactical warning derived from radar screens and the like), that is, warning of measures being taken that could be a prelude to attack.

It is important to stress that a measure may be valuable even if it is a low-confidence one. This point is generally overlooked in the pursuit of ideal but unattainable iron-clad guarantees. By a low-confidence measure we do *not* mean one with loopholes which the opponent may exploit without fear of detection. Such a measure warrants no confidence at all. A system which presents, say, a 10 per cent. probability that the opponent's preparations to launch surprise attack will be detected, but which the enemy cannot manipulate to reduce the probability still further, is a low-confidence measure. And a 10 per cent. chance of detection may well be utterly unacceptable to an aggressor who feels that surprise is essential to his schemes.

Technological progress is pushing us rapidly and inexorably towards a position of almost intolerable mutual menace. Unless something is done politically to alter the environment, both sides will before many years have numerous missiles accurately pointed at each other's hearts and ready to be fired literally at a moment's notice. Even before that time arrives, aircraft depending for their safety on being in the air in time will be operating more and more provocatively according to so-called 'airborne alert' and 'fail safe' patterns. Nothing which has any promise of obviating or alleviating the tensions of such situations should be overlooked.

HOW STRONG IS RUSSIA ?

By BRIGADIER J. V. DAVIDSON-HOUSTON (late Military Attaché in Moscow)

IN 1939 Hitler's Germany looked frighteningly strong. So does the Soviet Union today. Its actual strength, however, can only be assessed by an objective examination of the weaknesses, many of which lie beneath the surface.

Russia's assets are obvious. Her population is four times that of the United Kingdom; her armed forces, the bulk of them military, are estimated at over 4,000,000, furnished with modern equipment. Since the West could not hope under present conditions to resist this mass without nuclear weapons, she is in a position to put on us the onus of firing the first atomic shot or else of accepting some military *fait accompli*. She has allotted a high priority to work on guided and ballistic missiles, and with the help of German and other foreign scientists has demonstrated her ability to build and operate miniature satellites. She has contrived a series of fission and fusion explosions, and it must therefore be assumed that in due course she will be capable of launching intercontinental missiles with the nuclear warhead. The reluctance of her opponents to use the nuclear deterrent goes far to restore her confidence in large conventional forces.

As regards organization for war, a dictatorship has of course many advantages over a democracy. It is untrammelled by public opinion, and all national resources are unreservedly at the disposal of the regime. Mr. Khrushchev and his colleagues are the sole judges of what may be expended in men, money, and material. This concentration extends, moreover, to the Warsaw Pact, the nominal counterpart of N.A.T.O., in which there is no question of trying to achieve a compromise between the views of 15 sovereign States. Strategic decisions are taken in Moscow and communicated to the General Staffs of the puppet governments, and the contribution of countries like Poland and Hungary is primarily to facilitate the operations of Russian forces. One cannot imagine Bulgarian or Czech generals, for example, being allotted major roles in the organization.

In the international field the U.S.S.R. has profited by allying itself with any country or movement hostile to Western interests. While ruthlessly suppressing nationalist aspirations among the satellites or in its colonial territories of the Caucasus or Central Asia, it has exploited against the West the ambitions and discontents of political groups in Africa and the East. In most of the Afro-Asian countries the Russian Communist threat has seemed remote in comparison with the realities of European influence, so that their leaders have been more than ready to play off the more distant power against the nearer. Moreover, social and economic conditions in these countries lend themselves to exploitation by Communist agents. Many neutralists do not yet appear to have grasped the fact that the establishment of Soviet embassies, trade delegations, and organs of economic aid greatly assists the work of local Communists and lessens the remoteness of Soviet imperialism.

From the defensive aspect, the vastness of Russia's territory has throughout history operated in her favour against foreign invaders. The dispersion of her industries and depots, and the eastward shift of their centres of gravity, have likewise increased the difficulty of attacking them, whether by land or air. Moreover the U.S.S.R.'s western territories are now cushioned by a belt of puppet States, while the alliance with China reduces her commitments in the Far East.

In the realm of internal security the Soviet Union reaps a major advantage. The ruthless efficiency of a police state minimizes the possibility of espionage or subversion, whereas in the democracies Communist parties are allowed to establish and maintain themselves in order to undermine the regimes under whose protection they live, and to assist Moscow with intelligence, sabotage, and other cold war activities. It is impossible to extirpate disaffected elements and remain a democracy.

So much for the assets. What of the liabilities ?

To begin with, Russia's 'inexhaustible manpower,' perhaps always somewhat illusory, is in reality both insufficient and inefficient. One of the first things that strikes an observer in the U.S.S.R. is extravagance in the use of human resources. A farm will employ four or five times as many hands as a similar acreage in Britain ; the average production per head in industry falls far behind that of Western countries ; while Government offices, always heavily staffed, operate at a tempo which can only be described as low-g geared.

The huge Army at present maintained requires a far larger and better trained administrative tail than it did in the last war, owing to the greater complexity of its modern equipment and the increased tonnages of ammunition and petrol now needed by the fighting troops. Mr. Khrushchev and other leaders of the regime have in fact publicly admitted that the development of industry and agriculture, Russia's Achilles Heel, calls for a reduction in armed forces, although steps to this end appear to have been postponed by events in Hungary, the Middle East, and elsewhere. The fact that all officers are Regulars indicates the amount of higher-grade manpower tied to military potential.

In spite of the existence of a body of highly qualified technicians and scientists, the general level of technical training and ability remains low. To anyone who has watched Russian labour in action it is obvious that results are obtained only by a disproportionate expenditure of effort and resources. When one project is accelerated, others fall behind. At this point it is pertinent to observe that while Russia's population has lately reached 200,000,000, that of the United States, with its higher standards of education and skill, has now topped 175,000,000.

Granted their huge Army, it is unlikely that the Russians could move and maintain it in modern war. Largely rail-bound through lack of an adequate road network east of the German frontier, it could not hope to manœuvre its cumbersome panoply and receive the enormous daily tonnages of supplies in the face of heavy air attack, nuclear or otherwise, on centres of communication. For these reasons the conventional Army must now be regarded rather as a cold war weapon and a means of maintaining the authority and prestige of the Soviet Empire.

When one considers that the senior appointments in the Russian forces are held by men who were marshals and generals in 1945, one may also question the adequacy of the military leadership. The danger of over-aged commanders was demonstrated clearly enough in 1940, and it is difficult to believe that those who learned generalship by trial and error in the mass battles of the last war are mentally flexible enough to plan and conduct campaigns under modern conditions.

In spite of her progress in the research and development of atomic and long-range weapons, Russia is still relatively vulnerable. Her fighter and anti-aircraft defences could not completely cover her extensive perimeter, while any aggression by her could be countered from a ring of N.A.T.O. bases. Moreover, she cannot

count on achieving a *blitzkrieg* by neutralizing all these bases simultaneously, since surprise would be lost as soon as the attack on the most distant objective had been launched.

The advantages of a dictatorship as an organization for war are qualified in the case of the Soviet Union by the over-centralization of her decision-making machinery. The excessive concentration of authority in Moscow, and the habit of referring to the highest organs questions which in the free countries are decided by comparatively junior officials, cramp initiative and make for rigidity, so that the destruction or isolation of important centres or individuals could lead to dislocation or paralysis under conditions of nuclear warfare. The recent decentralization of certain functions, mainly economic, to regional headquarters should mitigate this evil to some extent, but the units are still very large and their co-ordination in Moscow will present a major problem even in peace. Communist policy itself cannot of course be decentralized.

Mention has been made of the advantages of dispersion, but in Russia's case these are counterbalanced by the fact that her communications, especially east of the Urals, are rail-bound and tenuous; since the great bulk of the population is concentrated in the west, the eastward move of industrial centres entails considerable risks in the circumstances of long-range war.

The exploitation of anti-Western feeling in Asia and Africa is also a two-edged weapon. As dependent territories achieve self-government, a potent means of trouble-making will be denied to Moscow, although admittedly the success of these new States in maintaining their stability may remain in doubt for some years. The loss of the Indian Army and of colonial bases, while a handicap in localized operations such as the recent Middle Eastern expeditions, is of decreasing importance to the ultimate balance of power. On the other hand, Russia shows no intention of conferring freedom on any of her own subject peoples, within or without the boundaries of the U.S.S.R. These will become an increasing liability, for nationalism can only be kept in check by force, and any concession to local interests, as in Poland or Hungary, mitigates the tributary status of the satellites. Militarily the East European puppets are of little value except for local defence, and might become a further liability should Soviet power sustain a reverse in either peace or war.

Nor must it be forgotten that Russia's economic assistance to China and to countries such as Egypt and Syria is primarily for military and political purposes and contributes a further drain on her already extended resources.

Last, but by no means least, is the Communists' fear of truth. Enormous efforts are made to impress their own and foreign peoples with their achievements, while concealing the shortcomings and the progress made by other nations. The testimony of defectors during and since the last war demonstrates the shattering effect of the truth upon the morale of Communist subjects.

The balance is not an easy one to strike. In certain respects Russia has caught up with the Western Powers, though at great cost to her people's standard of living; in others she is still far behind. There is no general standard of comparison because her rate of development has been so uneven. We can be sure that the Soviet rulers, preferring cold war to hot, will fully advertise their strong points and conceal their failings, whereas the situation of the democracies is necessarily a matter of public knowledge. Thus, while we are well aware of Russia's strengths, her weaknesses

are less palpable. The chief of these, however, appear to be, first, over-centralized government, where major changes of policy are interwoven with struggles for personal power; and second, wastefulness and inefficiency in the utilization of human and material resources, and the accompanying difficulties of agriculture in keeping up with industrial expansion. Moreover, the Soviet system seems unable to maintain level standards. Conditions vary in different parts of the country, between sectors of industry and among army formations, to a much greater degree than in the West. To these must be added the relative vulnerability at the present time of the U.S.S.R. in a nuclear war and the unsolved problem of the subject nations.

Finally, the attempt to 'fool all the people all of the time,' to insulate the Russian from the truth (even from the works of his own writers) and from intercourse with external thought and life, cannot but fail in the long run. This, perhaps, is the greatest danger for the Soviet regime, and one of which its directors are well aware. Let us hope that our own are equally aware of it.

LONE WOLF

By

MAJOR REGINALD HARGREAVES, M.C.

"In war, individual action can only be justified by results." *Blaise de Montluc*



IN the spring of 1856 a Congress assembled in Paris to frame the peace terms that would officially end the Crimean War. It continued in session to debate certain changes in international law, mainly concerned with the transit of neutral goods in time of conflict, whose adoption the course of recent events appeared to have rendered highly desirable. In due course the draft Declaration of Paris put forward the proposal that a neutral flag should be held to cover all neutral goods with the exception of contraband of war. It further submitted that neutral wares, other than contraband of war, should not be liable to capture under an enemy flag. The revisions adumbrated were generally welcomed; even Britain offering to forego her traditional right to confiscate enemy property aboard neutral vessels in return for endorsement of the Declaration's initial clause that: "Privateering is and shall remain abolished."

It was at this juncture, however, that the American President, Franklin Pierce, urged that the first article of the Declaration should carry an additional and far more comprehensive paragraph to the effect that: "The private property of the subjects or citizens of a belligerent on the high seas shall be exempted from seizure by the public armed vessels [i.e. warships and/or privateers] of the other belligerent, unless it be contraband." This proposal, since it sought to endow the subject of a belligerent State with similar privileges to those enjoyed by a neutral, failed to gain majority support. Having reached an *impasse*, the Congress broke up; and the legal standing of the privateer was relegated to that realm of impotent ambiguity in which international law invariably takes refuge when incapable of arriving at a clear-cut fiat commanding general acceptance. In the circumstances, the United States—at least by implication—retained her traditional right to employ privateers 'at will'.

The amorphous outcome of the 1856 deliberations could easily have been anticipated for, in spite of gestures of accommodation, the fundamental standpoints of Britain and the United States were so diametrically opposed as to be virtually irreconcilable. Retention of the power to authorize privateering was obviously in America's interest, since with this right held in reserve the Government was spared the necessity—at that time—of maintaining large standing naval forces; although in earlier days President Monroe had expressed the view that it was "unworthy of civilized States to prey on private property at sea". Britain, on the other hand, with her ever-expanding maritime commerce, had more to lose at the hands of the privateer—as the past had clearly demonstrated—than any other major Power. Disparity of interests therefore denied the problem any common denominator upon which agreement could be founded. And there, for the time being, the matter was allowed to rest.

The term privateer appears to have been first employed by the distinguished Admiralty Judge, Sir Leoline Jenkins, in a letter dated 5th December, 1665. It was a term coined to describe a particular class of privately-owned and privately-armed vessel, employed by the British Admiralty in the reign of Charles II. But the practice of licensing privately-owned and armed vessels to commit what amounted to acts of war at sea is of much earlier date, its origin being deeply rooted in common law, and in land law rather than sea law at that.

In medieval days the Charters granted to intensely monopolistic borough authorities endowed them with the right to impose stringent restrictions on the merchant-stranger seeking to trade within their boundaries. Thus a huckster from London anxious to do business in, say, Winchester would be required to pay substantial tolls before he could even bring his goods through the city gates. Furthermore, many boroughs were protected from infringement of their Charters by the right to make reprisals. Thus, amongst other things, if the burgesses of X—— nursed a legitimate grievance against the authorities of a neighbouring town, it was possible for the Mayor of X—— to distrain on the goods of any citizen of the offending community on which he could contrive to lay his hands.

With seaport towns, where much of the commerce was with merchant-strangers from overseas, native hucksters who had suffered loss at the hands of the foreigners, or had been unable to recover debts from them, were empowered to seize goods of commensurate value from *any* waremonger of the defaulter's State whose ship happened to be in port.

Theoretically it was not permissible for the injured party himself to put this form of retribution into effect; ostensibly that was the responsibility of certain duly authorized municipal officials. But if no merchant-stranger's vessel happened to be in the harbour, the aggrieved trader could be issued with a Letter of Marque and Reprisal which empowered him legally to adjust his claim at sea by force of arms. Equally, if a merchant had suffered loss through a piratical attack at sea, he could be issued with a Letter of Marque and Reprisal authorizing him to recompense himself from *any* vessel owned by *any* of the original despoiler's fellow-countrymen. One of the earliest of these licences was that issued in the reign of Edward I (A.D. 1272-1307) to Bernard Ongressille, whose ship had been run aboard and captured on the high seas, subsequently being taken captive into Lisbon and there sold.

As a means of authorizing rough and ready retribution the Letter of Marque could claim a certain amount of justification, providing that its terms were not given too dangerous a latitude. It was when a shipmaster predatorily continued to operate under his Letter of Marque long after he had reimbursed his original loss to the full that the system fell into grave abuse.

In time of war, however, the vessel operating under a *general* Letter of Marque was clearly designed to play the part subsequently performed by the privateer—"an armed vessel belonging to one or more individuals, licensed by Government to take prizes from an enemy".¹

This is clear from the terms of the licence granted by Henry III. to Adam Robernolt and William le Sauvage, which empowered the recipients "to annoy our enemies by sea, and by land, wheresoever they are able, so that they share with

¹ The legal definition quoted in *Commerce in War*, by L. A. Atherley-Jones.

us one-half of all their gain." As will be observed, the Commission is careful to incorporate the Monarch's long-established right to a moiety in all prize of war.

However dubious the ethics of the reprisal system, there can be no question but that it furnished a remarkably useful and instructive school of war. Thus in the early 15th Century, when jealousy of England's expanding overseas trade prompted certain Italian merchants, with the full cognizance of their Government, to seize English vessels and cargoes to the value of £24,000 while lying peacefully at anchor in Genoa harbour, the aggrieved shipowners took out Letters of Marque for a like sum, plus £10,000 by way of 'damages'. In effect, a handful of wares-mongers had the temerity to embark on a private war with the whole of the Republic of Genoa; and such was the vigour and hardihood of their shipmen that they did not rest content until all their losses had been recouped, plus a very generous sum in 'damages' for good measure.

The scale of these unofficial forays increased so inordinately during the following decade, while at the same time becoming so indiscriminate, that it was plain that the whole system had got badly out of hand. It was left to England's Henry V (A.D. 1413-1422) to decree that any assault, under cover of a Letter of Marque, on the nationals of a friendly Power would be punished as high treason. A sharp line was drawn, in effect, between the shipman legitimately sailing under a strictly delimited 'King's Warrant' and the sea-robber to whom all craft were potential prey without discrimination.

* * *

A source of acute embarrassment to any Monarch who sought to keep the issue of Letters of Marque within reasonable bounds was the wholesale award of licences by an inimical fellow-Sovereign with whom, in a legalistic sense, he was not actually at war. Henry VIII, for example, was far too preoccupied with other matters between the years 1509 and 1511 to countenance an official conflict with James IV of Scotland; nor was the latter in a position to support the expense of an open rupture. This did not prevent him, however, from issuing a certain Andrew Barton with a Letter of Marque which permitted that all-too-enterprising individual to turn himself into as pestilential a scourge as ever haunted the busy sea-lanes between England and the Low Countries. Indeed, in almost less than no time the name of Andrew Barton became a byword for wholehearted pillaging from Stockholm to Lisbon.

Like his regal forebears Bluff King Hal claimed outright 'dominion in the English Sea'—the area of the Channel and its approaches wherein Barton's activities had proved particularly costly to Portuguese shipping on the round trip to Scandinavia. It was to Henry, therefore, that the Portuguese Ambassador appealed for immediate action for the Scottish sea-rover's² suppression. Eager to comply with the request, but at the same time anxious to avoid the provocation that would be involved were he to employ one of the warships on his modest naval establishment, the King issued Letters of Marque to Lord Edward Howard and his brother, Lord Thomas Howard, accompanied by a very broad hint as to what was expected of them.

² Up to the end of the 14th Century all men serving aboard a vessel capable of warlike action were known as pirates, which was not yet a term of reproach. Sea-robbers were variously termed trespassers, freebooters, malefactors, or felons; the word corsair being then unknown.

On receiving his 'Commission of War', the future Lord Admiral lost no time in sailing from Thames-mouth in search of the defiant Scot, who was reported to be at sea in his 'great ship' the *Lion*, in company with another privateer. It was a month before Lord Thomas sighted the quarry, by which time he had become separated from his brother—as had the *Lion* from her sister-ship the *Jenny Pirwin*. In heavy seas Howard closed his antagonist, the cannon in both craft exchanging shot as rapidly as they could be loaded and fired; while a hail of arrows, quarrells, and bolts claimed many casualties on either side. Time and again Howard laid his vessel alongside the *Lion*, seeking to board and enter her, but it was only after desperate efforts that the English captain and a few of his followers gained a foothold. Grapnels having been thrown out, more of Howard's men swarmed over the bulwarks and the attack was pressed home with the utmost vigour.

Barton, with his right leg shattered by a cannon-ball and his body pierced in several places, propped himself against the mainmast, seeking to rally his men with blasts on his silver whistle and by beating a lively ruffle on his drum. It was not until their leader had collapsed from loss of blood that his crew cast away their arms in token of surrender. Meanwhile Lord Edward had succeeded in capturing the *Jenny Pirwin*; the smaller vessel also suffering a heavy battering before hauling down her colours.

Since, officially, peace reigned between England and Scotland, Barton was arraigned as a common malefactor, charged with having "robb'd the King's subjects within his streams"; for which the penalty was to "die by law, and be hanged at the low water mark". Barton succumbed to his wounds, however, before sentence could be carried out, while the members of his ships' companies escaped the extreme penalty and were, indeed, by contemporary standards, treated with unusual clemency. So when the Scottish Monarch remonstrated, demanding redress for Barton's death, Henry, blandly ignoring the fact that the freebooter had sailed the seas under a Letter of Marque bearing James's signature, drily replied that "doing justice on a pirate was no occasion for a breach of friendly relations between two Princes".

The preposterous anomalies that arose through the indiscriminate award of Letters of Marque were never more outrageously in evidence than throughout the early years of Queen Elizabeth I. It was a state of affairs for which the chaotic condition of contemporary political relationships was very largely responsible. Neither Spain nor England was in a position to go openly to war; but every sort of vexation and outrage short of formal conflict was sedulously perpetrated by both sides with the full, if covert, approval of their respective Governments. The Spaniards treated captured English seamen with the utmost severity and openly denounced Francis Drake and John Hawkins as pirates; yet they sailed under the Queen's warrant and were frequently accompanied on their intrusive trading ventures by a ship of the Queen's Navy. In La Rochelle a self-appointed Government of recusant Huguenots bid defiance to the Catholic Court of France and exhibited every readiness to issue Letters of Marque to anyone prepared to prey on Gallic shipping. The Protestant Netherlands were under the sway of Catholic Spain; with the expatriate Prince of Orange awarding Commissions of War to a swarm of privateers, who made the water-approaches to Antwerp and Amsterdam their particular hunting grounds. The refugee Orange Admiral, the Count de la Mark, actually had his shore headquarters in Dover; while that fraternity of Dutch and Flemish noblemen, ruined Netherlander merchants, and outlawed Hollander shipmen known as the 'Beggars

of the Sea,' waged incessant war on all Spanish craft encountered in the Channel under warrants signed by their banished Stadtholder.

When Spanish protests to the Queen who professed to hold 'dominion in the English Sea' waxed particularly wroth, Elizabeth's apologies would be as profuse as they were insincere. She would even send a small squadron into the Channel to scour the sea and officially reprove the local admiral for 'lyeing at ease' in Dover while the privateers worked their will right under his nose. But as everyone was comfortably aware, the Queen, by simulating anger, was only playing the game of *haute politique*; and Dunkirker and English freebooters continued unhindered to enjoy the marketing facilities of Plymouth and Southampton for the disposal of the captured ships and cargoes.

There were many erstwhile privateers in the force Drake led to Cadiz to 'sing the King of Spain's beard' in the April of 1587; and Newcastle, Hull, Bristol, and the Channel ports sent their privateers to aid in the task of defeating the Grand Armada in the year following.

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In 1609 the Dutch jurist Hugo Grotius³ published his *Mare Liberum* a lofty but, from a contemporary standpoint, an entirely impractical plea for the unconditional freedom of the seas, with the elimination of the privateer as a natural corollary. In writing as he did, Grotius was thinking primarily of the Spaniards and Portuguese, who under one Crown still divided the globe between them, rather than of the English. In Dutch eyes the England ruled over by the doltish, pusillanimous James I was, in a maritime sense, beneath contempt.

On ascending the throne James had made all haste to pronounce that he considered himself to be at peace with all the world. But if it takes two to make a quarrel, equally it requires more than one to make a peace. James's unilateral action was meaningless since Spain still considered herself to be in a state of war with Britain and behaved accordingly. In the outcome James, having concluded a spiritless treaty with the Dons which meekly accepted an absolute embargo on British trade with the Spanish colonies in central and southern America, went on to place privateering under absolute interdict. Thus "virtually all the Powers of the world were invited to prey on British shipping, and British shipping alone upon the sea was forbidden to hit back."⁴ Furthermore, the admirable school of war that privateering had provided was no longer available; the hard-won experience and repute gained in Elizabethan days became no more than a hoary legend.

Only in the Caribbean did a flicker of the old rumbustious spirit obstinately persist, where the men of Providence, on Santa Catalina island, like those of the neighbouring settlements of Association and Henrietta, devoted most of their energies to laying Spanish shipping under contribution. Dour, godly folk of stern Puritan stock, it never seemed to occur to them that, lacking anything in the nature of a Letter of Marque, their activities were unequivocally piratical—although their private morals and standards of conduct were those of a Calvinist theological seminary. Indeed, their ethical ambivalence was such that they were quite capable, on one and the same day, of slitting a Spaniard's gizzard and sacking their pastor for the 'horryd' offence of singing worldly catches on the Sabbath!

³ Latinised from his given name of Huig de Groot.

⁴ *The Naval Side of British History*, Sir Geoffrey Callender.

It was with the British Parliamentary Government's war with the Dutch that the country's disastrous lack of shipmasters and seamen with battle experience gained in privateering made itself most painfully apparent. For want of tried and proven sea-officers to take command in the hastily improvised Parliamentary fleet, an ex-Colonel of Dragoons like Robert Blake, or an infantry leader such as George Monck, was appointed a 'General-at-Sea,' with no option but to try to learn the job on the job. All things considered, these landsmen-turned-admirals picked up the fundamentals of the novel responsibilities they had assumed with astonishing speed and facility. It was a long time, however, before George Monck could be persuaded not to bellow the order for a squadron of battleships to "Charge!" and then "Right wheel!"

Hitherto, the destruction of enemy commerce had been as much a responsibility of the battle-fleet as the obligation to meet and seek victory over the enemy's main armament. But under the terms of the *Fighting Instructions* drawn up by Blake, Monck, and William Penn, commerce raiding was, in the main, left to the privateers; the battle-fleet reserving its energies to seek out and destroy the enemy wherever he might be found. How admirably this division of labour worked out is witnessed by the fact that of the 1,500 prizes taken during the course of the war, 700 were accounted for by the privateersmen.

The boot was on the other foot, however, after Admiral Sir George Rooke's victory over the French at Vigo Bay in the October of 1702. Rooke's battle-fleet had sustained a pretty heavy hammering, but a combination of outright losses and lowered morale drove the French to adopt the expedient of a *guerre de course* waged almost exclusively by privateers. And there can be no question but that they shouldered their task with outstanding courage and resource. So early as 1692 the daring and experienced Jean Bart had set about the business of privateering to such good purpose that he had brought more than 100 prizes into St. Malo within a single twelvemonth. His example was speedily followed by Du Guay Trouin, who took over the command of his first privateer at the mature age of 18. Eventually fought to a standstill by a British squadron, and brought captive into Plymouth, he made a romantic escape with the aid of a merchant's wife who had fallen a victim to his *beaux yeux*. Nearly cornered time and time again, he lived to be presented with a Sword of Honour by King Louis XIV and to receive a commission in the highly exclusive French Navy. One of his most notable captures was that of the *Falcon*, out of Boston, Massachusetts, with a cargo of spars and lumber destined for the British Navy.

While such men as Du Guay Trouin, Jacques Cassard, and Hervé Dufresne were playing havoc with British commerce in Biscay and the eastern Atlantic, the Pacific was becoming increasingly familiar with the names of Captain Woodes Rogers and William Dampier—privateers by virtue of their Letters of Marque, although differing in little else from adventurers of more openly piratical persuasion.

In home waters the French, who generally had enjoyed an exceptionally long run of luck, suddenly found their activities severely hampered by the appearance on the scene of a couple of West-country mariners, Stephen Woon and Benjamin Cruse. Such phenomenal success attended the efforts of these two worthies that a contemporary rhyme summed up the situation thus:

"The anchor is up and the harbour chain down,
And the bells ring merrily out from the town;

'We shall soon find a Frenchman or Spaniard,' they say,
'And bring something back to this snug little bay'."

Unfortunately, neither Woon or Cruse could resist the temptation to combine a little smuggling with their other activities; and having callously slain a tide-surveyor who interrupted them while running a cargo of brandy, they were condemned to death and hanged in chains.

Generally speaking, the very magnitude of Britain's sea commerce played into the hands of her enemies. For in one year alone, although France had not a single ship of the line at sea, Gallic seamen took 812 prizes, as against a counter-haul of 240. For all that, the volume of British maritime trade was scarcely affected, since "8,000 merchant ships were constantly employed by the British merchants."⁵

* * *

The War of the Austrian Succession, which in 1744 brought Britain and France once again into the field as antagonists, saw Fortunatus Wright and George Walker run a particularly successful privateering course; the former acquiring booty to the value of £220,000 in just under eight months' sea time. Most privateers preferred to act on the lone wolf principle, operating entirely on their own or with, at most, a modest consort to relieve them of prisoners and act generally as a tender. Walker, on the other hand, commanded a squadron of no less than four vessels, which, from their respective names—*King George*, *Prince Frederick*, *Duke*, and *Princess Amelia*—were invariably referred to as the 'Royal Family' privateers, and right royally they prospered.

The heyday of privateering, however, was reached during the War of Independence; nor were the successes scored by the men who sailed under Letters of Marque issued by the authority of Congress in any way confined to American waters.

Naturally enough, with the outbreak of the struggle the stripling United States was in possession of no standing naval force. But although central organization was lacking there were plenty of men who had sailed in privateers during the French-Indian wars, and not a few who had made acquaintance with the routine of a British man-of-war. So even before the Board of Admiralty established by the Government of Massachusetts could go into action, George Washington had assumed the responsibility for arming five or six privately owned vessels to cruise off the New England coast as duly authorized privateers, with a scale of pay and subsistence laid down and rules established for the division of prize money.

The Naval Committee—whose original three members were speedily augmented by a further ten so that the 13 states were all represented—started its operations by fitting out "a swift-sailing vessel, to carry 10 carriage guns and a proportionate number of swivels, with 80 men, to cruise for three months eastwards,"⁶ for the purpose of intercepting British transports. Another craft was added, then two more, and by 13th December orders had been given for a further 13 vessels to be furnished and prepared for sea. These few craft formed the nucleus of the Continental Navy, but their activities were supplemented by a swarm of privateers that played havoc with the British seaborne lines of communication, and sent London insurance rates soaring from 2½ to 5 per cent. if with convoy and from 15 to 20 per cent. if

⁵ *Histoire de la Marine Francaise*, Lapeyrouse Bonfils.

⁶ *Journal of Congress*, 13th October, 1775.

sailing alone. In 1778 a return of the British Parliament listed 173 American privateers "of which authentic account has been received." Of these the return showed only 34 to have been captured and brought in, while 733 vessels had been taken by the privateers, of which 127 had been retaken and 47 released. The value of the remaining 559 was put at £2,600,000, plus loss of salvage and interest on the cargoes.⁷ The Library of Congress has compiled a list, covering the whole period of the conflict, which discloses that some 1,700 Letters of Marque were issued; while another estimate reveals that, in all, some 2,000 privateers took the seas, armed with a total of 18,000 guns and manned by crews aggregating 70,000 seamen. Indeed, such were the attractions offered in the way of high wages and the chance of profitable prize that it has been affirmed that more men were employed on ship-board than in the Militia and Continental Line combined in every year save 1776.

In European waters Captain Lambert Wickes, in the *Reprisal*, operated as a duly commissioned officer of the Continental Navy. So did the redoubtable John Paul Jones and the enterprising Gustavus Conyngham, although the Commission of the last-named as a serving officer was made out by the American Naval Office in Paris.

It was Benjamin Franklin and Silas Deane who issued the necessary Letter of Marque to the 120-ton *Black Prince*, whose crew was made up of erstwhile smugglers from Poolbeg, in Ireland, under the command of the Boston shipmaster, Stephen Marchant, with the somewhat sinister Luke Ryan as his second-in-command. It was Franklin's humanitarian design primarily to secure prisoners to exchange for American captives in British hands. But since the hold of the *Black Prince* could accommodate no more than a score or so, at the utmost, the privateersmen's equally powerful urge to concentrate on the seizure of profitable prize usually won the day. When the *Fearnot* and the *Black Princess* were added to the original vessel, they accounted for 114 British ships, of one sort and another—burned, scuttled, ransomed, or sent as prizes into Gallic ports.

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The battle of Trafalgar was the last great fleet action in the struggle between Britain and the 'man of destiny' bent on securing hegemony in Europe. Thereafter, with the Gallic squadrons blockaded in their ports, Napoleon was driven to pursuing a *guerre de course* by means of his privateers. Over a considerable period his corsairs reaped a rich harvest; the *Sans Souci*, the *Intrépide*—with a weakness for sailing under American colours—and *Le Frontier* all earning a sinister renown and capturing many valuable prizes before being brought to book. The last-named met her end when seeking to run an apparently helpless East Indiaman aboard. For as the privateer ranged alongside, the screens hiding a round dozen swivel guns went down with a crash while a strong body of Marines leapt from concealment to add their volume of fire to a welcome so warm that the Frenchman hastened to haul down his flag. This precursor of the 'Q-ship' device of the first World War was responsible for many captures although it was not employed in eastern waters, where Robert Surcouf instituted a positive reign of terror. In his first, highly fruitful Indian Ocean voyage, however, the Frenchman was practising nothing less than plain, unadulterated piracy, since the Governor of Mauritius had refused to issue him with the Letter of Marque that would have legalised his activities.

⁷ A slightly later return showed that 1,095 vessels and the cargoes of 13 more had been carried into Boston, Salem, Beverley, Newbury-point, Marblehead, Gloucester, Haverhill, and Ipswich. (Quoted in *Annals of Commerce*, David Macpherson, 1805.)

It was not so much dearth of British cruiser forces which permitted the corsairs to thrive so abundantly and keep their losses down to an average of 50 on the twelvemonth. It was the overwhelming strength with which the privateer was armed compared with a vessel of similar tonnage, and the far better sailing performance of the privateer craft themselves. For it is to be borne in mind that it was the French who gave the world the design for the fast sailing frigate, and building ships with an unusual turn of speed has always been an attribute of their yards.

* * *

Nothing having been determined with regard to the status of the privateer by the signatories of the 1856 Declaration of Paris, in 1861 President Lincoln's Secretary of State, William Henry Seward, renewed the proposal put forward five years earlier by Franklin Pierce. But on 3rd March, 1863, Congress passed an Act which authorized the President, in any foreign or domestic war, to issue Letters of Marque to privately owned vessels. Although Mr. Lincoln does not appear to have availed himself of this power, the Government of the Confederate States issued 'Commissions of War' to a number of privately owned craft. Letters of Marque were also offered to certain foreigners but were mostly declined in view of the threat of the Federal Government to treat bearers of such Commissions as common pirates. From the point of view of international law, however, it would appear that by pronouncing the Southern ports as under blockade, President Lincoln automatically conferred belligerent status on the Confederate States, which was tantamount to acknowledging their entity as a separate nation, with all a nation's privileges including the authority to issue Letters of Marque.

In the event, the most successful practitioner of the *guerre de course* on the Southern side was an officer holding a Confederate Regular commission, Captain Raphael Semmes. His first appointment was as commanding officer of the venerable *Sumpter*, in which he captured 18 Northern merchantmen. He was next given command of the British-built *Alabama*, which American legal representations had been unable to detain in her Birkenhead shipyard. Fitted out in the Azores and taken over there by Semmes and his ship's company in August, 1862, within two months this extraordinary lone wolf had taken and burned a score of prizes. Moving on to a cruising station in the Caribbean, Semmes took eight more prizes. A call at Fernando de Noronha yielded a further two and a spell off the coast of Brazil accounted for another ten. Six months in the region of the Cape of Good Hope were less fruitful, with a haul of only seven vessels; whereafter Semmes, learning that a Federal squadron was in search of him, moved on to the China Sea where his activities speedily paralyzed American maritime commerce.

Semmes was next heard of at Cherbourg where he hoped to give the *Alabama* the thorough overhaul she so obviously needed after her continuous voyage of over 75,000 miles. The French authorities, however, refused the corsair permission to make use of their dockyard; and in the roads the Federal sloop of war, *Kearsarge*, was grimly waiting.

It was the morning of 19th June, 1864, when the *Alabama* was seen heading boldly out from shelter, and once she had cleared territorial waters she was resolutely closed by her adversary. As the range shortened a duel was vigorously joined in which both vessels fought with a stubborn courage which left it to the slightly superior armament of the Federal craft, in particular the heavy Dahlgrens and short 32-pounders, slowly but surely to win the advantage. With the *Alabama* sinking, Semmes was picked up by a British yacht whose ship's company had been

fascinated spectators of the fiery encounter. But there was one thing that Gideon Welles never forgave the recreant, that he should have cast his sword into the sea before being hauled into safety. For, after all, was it not United States Government property?

With the coming of peace the United States House of Representatives made no move to rescind the legislation empowering the President to employ privateers at will. But a Prussian decree of July, 1870, affirming that French ships would no more be liable to capture as prize of war than would neutral vessels, was warmly commended by Secretary Seward.

At a time of mounting tension between Britain and France in 1886, however, the French Admiral Aube took it upon himself to declare that, in the event of war, he would strike at British seaborne commerce and communications by employing privateers on the widest scale. Far from reproving him, his Government took early occasion to appoint him Minister of Marine.

The amending legislation whereby the 1908 Declaration of London sought to clarify a number of dangerous ambiguities with regard both to privateers and the transit of neutral goods in time of war, though warmly commended in many quarters, failed to reach the Statute Book.

Thus the armed raiders, privately owned vessels requisitioned and equipped by the State, which took the sea in 1914 operated with every legality. The damage wrought by these modern counterparts of the erstwhile privateer, particularly by Count von Lückner's *Pass of Balmaha*, ran into many thousands of pounds. Much the same may be said of the nine armed merchantmen sent out by the Germans in 1939. One of them, the *Atlantis*, kept the sea for 622 days, capturing or sinking 26 vessels before herself falling victim to the guns of H.M.S. *Devonshire*. These craft, of course, were manned by Regular Navy personnel; but to all practical purposes their mission was analogous to that of the privateer of earlier days.

The standing, even the legal permissibility or otherwise, of the privately owned vessel licensed to commit acts of war at sea is still a matter to be clearly and finally determined. So far, no fiat appears to have emerged to which unqualified assent has been given by all interested parties.⁶ And since international jurists appear to be far more interested in spinning chiliaristic formulae than in getting down to hard facts, it would be optimistic in the extreme to anticipate a clear, unequivocal ruling on the matter.

But one thing can be regarded as a moral certainty: that any future conflict that lends itself to their activities will find privately owned, even if publicly armed, vessels as active as ever they have been in the past. And this whatever contemporary international law may have to say on the subject *pro* or *con*.

Actually, international law is one of warfare's first casualties mainly because, upon examination, its precepts are found to apply more appropriately to the 'war before last' than to the conflict currently being waged. In any case, as Cicero pointed out long since, *silent leges inter arma*.

⁶ The China of Mao Tse-tung, for example, has neither been consulted in the matter nor has pronounced a binding opinion upon it.

THE FRENCH ARMY AND LA GUERRE RÉVOLUTIONNAIRE

By PETER PARET

DURING the past few years a group of French officers has reconsidered the problems involved in fighting a particular kind of limited war—the war against subversion and revolution—and reached conclusions that have become codified and famous under the name *La Guerre Révolutionnaire*. The roots of these theories go far back in time and are considerably diffused; on the military plane the immediate impulse giving rise to them were the French defeats in Indo-China and Tunisia, followed by the Algerian stalemate. The doctrine is an answer to the methods of insurrectional war successfully employed against France, or rather to an interpretation of these methods. Whether the French theorists' reading of Trotsky, Mao Tse-tung, and their nationalist followers is entirely accurate may be doubted, but such a question lies beyond the scope of a short article, which attempts no more than to compress the numerous writings on *La Guerre Révolutionnaire* into a representative outline, sketch the historical background, and suggest at least a few significant implications of a doctrine that has lately achieved a striking and peculiar importance.

Generally in modern war the civilian population does not constitute the main, and certainly not the first, object of attention. It is usually thought necessary to deal with the enemy's armed forces and his war-making potential before the population as such can be subjected to direct pressure. In revolutionary war this order is reversed. Revolutionary or insurrectional war has for its aim the take-over of power in the state—that is, internal conquest—made possible through the active help of a population that the insurgents have "physically and morally conquered."¹ Military power plays a secondary role in such a contest; the decisive factor is the population, which is both the strongest force in the struggle as well as its primary object.

To place army and people into separate categories may, however, be misleading; they are interdependent in revolutionary eyes. The populace, according to Mao's well-known formulation, is for the army what water is for fish. And more concretely, "A red army . . . without the support of the population and the guerrillas would be a one-armed warrior."² The conquest of the population is therefore the indispensable opening of insurrectional war. Once this has been achieved, once the population has been schooled and organized for the revolutionary purpose, it becomes possible to go on to a second stage—open warfare—under conditions that are unfavourable to the enemy, even though his military forces may be larger and, according to traditional standards, better trained and equipped than those of the insurgents.

The initial move in the fight to control the people consists in the creation of 'bases.' By 'base' the vocabulary of *La Guerre Révolutionnaire* means any area, perhaps no larger than a village, whose inhabitants have been won over to the revolutionary cause and now find themselves under its physical and psychological domination. The correct strategy would then be to multiply and develop these bases until larger 'liberated zones' are created, from which military attacks can eventually

¹ Ximenès, "La guerre révolutionnaire et ses données fondamentales," *Revue Militaire d'Information*, February-March, 1957, p. 8.

² Ximenès, p. 15.

be launched against the government. The whole process may be conveniently divided into five stages.³

(1) The first bases are established by propagandists who secretly set to work among the people, appeal to any resentment against the legal authorities, perhaps found a discussion group, while taking care not to offend local attitudes and prejudices by too blatant a diffusion of revolutionary ideology.⁴ Their task is the preliminary reconnaissance of the ground over which the main battle will be fought: the population.

(2) Once the agitators have secured a reasonable foothold in the life of the village or town-quarter, they begin to organize the people into politically conscious groups, according to age, occupation, and interests. These groups supervise each other, and in turn are controlled by committees on which active insurgents predominate. Gradually a network of co-ordinated opposition to the regime spreads over the country; what the French in Indo-China called *pourrissement*—rot—sets in. An *infrastructure* of propagandists, agitators, spies, and political and ideological leaders assists and directs dissatisfied elements among the population; revolutionary discipline is imposed, which uses terror and assassination—"the execution of traitors"—to eliminate dangerous opponents and intimidate the neutral and indifferent.⁵ The people grow unwilling or afraid to help the legal authorities, who may only now begin to suspect the difficulty of the struggle against their invisible enemies. They will, for instance, find it almost impossible to introduce their own agents into the secret network, and so are deprived of essential intelligence; on the other hand the 'base' provides reasonable security for the instigators of the strikes, sabotage, manifestations, and even the riots that are needed to develop a climate favourable to revolt.

(3) Armed bands are formed, which engage in small actions such as ambushing a government patrol or raiding an isolated police post. Propaganda, psychological warfare, and sabotage grow intense.

(4) Terrorism and guerrilla activity compel government forces to withdraw from certain areas, and the insurgents succeed in creating liberated zones or *bases d'appui*—territory "in which the legal government has been completely eliminated and the revolutionaries have installed their own system."⁶ The rebel leaders can emerge into the open and establish a provisional government, not only to strengthen their control of the people but also to gain whatever advantage might lie in the factor of legality. Governments friendly to the insurrection can now recognize it, supply it with arms, and act in its interests on the international scene. A Regular army is organized, which further helps to transform insurrection into legitimate war. By extending their raids and acts of terrorism to the still unconquered areas, the rebels do all in their power to compromise the population and widen the rift between it and the authorities.

³ Commandant J. Hogard, "Guerre révolutionnaire et pacification," *Revue Militaire d'Information*, January, 1957, p. 11. Commandant Hogard's categories have been criticized as being too rigid and are not used by every writer; their clarity nevertheless renders them most acceptable in a brief survey.

⁴ An interesting analysis of their methods can be found in Chef d'escadrons L. Pichon's "Caractères généraux de la guerre insurrectionnelle," *Revue Militaire Générale*, July, 1957.

⁵ Une Groupe d'Officiers, "La guerre du Viet-Minh," *Revue Militaire d'Information*, February-March, 1957, pp. 32-33.

⁶ Ximenes, p. 17.

(5) The last phase consists in a general psychological and military offensive against the government and its armed forces.

Obviously this, or any, classification cannot reflect the fluidity of the revolutionary process. Events overlap and blend, to some extent their sequences vary. For instance, dissatisfied men may band together, find arms, establish themselves in a village, and proceed to transform it into a 'base'; though it must be remembered that as long as they are not protected by the population they can hardly be a match for government forces. Nor may it prove necessary to go through all five steps: the organization of liberated zones, or even of strong guerrilla units, may demoralize an opponent and induce him to grant fatal concessions. Nor, as has already been suggested, can strict divisions be drawn between the revolutionary army, guerrillas, and the mass of the population. The lack of complex equipment and of a long administrative tail renders much technical training unnecessary; it is easy for a civilian to pass into a guerrilla formation or into the Regular army. Regular units may be assigned to perform the tasks of guerrillas. One of the most important aspects of war, the gathering of intelligence, lies for the greatest part in the hands of civilians; and it should be noted that the rebels do not separate military, political, and economic intelligence.

The unusually close connection and interdependence of military, political, and psychological means is one of the outstanding characteristics of *La Guerre Révolutionnaire*. In recent years this manner of fighting has generally proved itself superior to the orthodox methods opposing it. Traditional principles of war are accepted by the insurgents, such as the need of safeguarding the security of the base, or of maintaining the morale of one's forces; but in the framework of very extensive political and psychological efforts. The superiority of the revolutionary armies which are scarcely ever as well equipped as the forces they dodge, harass, and finally defeat is based on two factors: the disciplined political conviction of their cadres and the conquest of the population.⁷ The wars they fight are usually of long duration and marked by a relative absence of fronts; their clandestine and ideological features impose a heavy moral strain on both sides.⁸

* * *

A summary of the French answer to insurrectional war might well begin with Commandant Hogard's argument that to win the French must first give up certain illusions.⁹ They should realize that complete victory is almost impossible to achieve. If the enemy is beaten in the third, fourth, or fifth stage of insurrectional development, he can easily enough revert to an earlier phase. The best one might hope for is to limit him to the establishment of cells and the spreading of propaganda. It would furthermore be dangerous to confuse the cause of insurrectional war—the will of an organization, which sets off the struggle and pursues it—with the 'internal contradictions' of society exploited by the rebels. The Algerian rebellion, according to this interpretation, was not born of Muslim discontent with political and economic inequalities; the real cause lay in the wish of Cairo and the F.L.N. to chase the French from North Africa. It would therefore be pointless to expect that political and economic reforms by themselves could end the insurrection.

⁷ Ximenes, p. 17.

⁸ Colonel Rocolle, "Les constantes de la guerre subversive," *Revue de Défense Nationale*, February, 1958, p. 250.

⁹ Hogard, pp. 13-14.

To hope that a revolutionary war can be won by arms alone is, however, equally vain. As long as the *infrastructure* of the bases remains in being, decimated rebel units are easily reinforced and even newly organized. "A resistance movement can be stamped out," a civilian authority has written, "by annihilating all of its networks, no matter where they are—if one is ready to pay the price. But . . . these various political cells would simply start growing all over again soon after military defeat."¹⁰

Finally, it is wrong to think that the war can be won by negotiation. The rebels are not interested in partial victory; negotiations, by helping them, only accelerate the process that leads to their gaining total power in the country.¹¹

Once freed from these misconceptions, Commandant Hogard suggests that it should be possible to exploit the doctrine's weaknesses, of which three seem particularly important.

(1) Insurrectional war assigns a pre-eminent role to psychological warfare. Its use "is based on the sense of good and evil innate in every human being . . . if the revolution wishes to succeed it must pervert this moral sense." The superior moral and ethical code of the French should give them an advantage over the enemy, as long as they show equal aptitude in the use of psychological warfare.¹²

(2) The early process of insurrectional war, the movement from propaganda to the first tentative raids, is a slow one. The enemy forges his weapons under the eyes of the legal authorities, and can only hope that security forces do not interfere until he himself is ready.

(3) Most important, the conquest and control of the population, which is an indispensable condition of success, is wholly dependent on the existence of an *infrastructure*, the politico-military network covering the bases. If this organization is broken up, the war collapses.

Specifically, government action should proceed along the following lines. During the early stages of an insurrection—the first two phases when violence has not yet broken out—it is relatively easy to prevent further deterioration by an energetic effort to educate public opinion, coupled with necessary reforms, "pure and simple repression" by the police, administration, and courts; and by intelligent army control of the danger zones. This latter would consist of a network of small posts, of company or even section strength, backed up by mobile detachments that are ready to intervene in emergencies. Besides controlling their respective areas and gathering intelligence, these posts serve as centres of social communication, which attempt to supervise and guide the lives of the inhabitants. The closer the co-operation between military and civil authorities, the more dependable the success of this counter-network to the illegal *infrastructure*.

One of the important practical effects of the ideas of *La Guerre Révolutionnaire* has been the establishment by the French of sizeable administrative and psychological warfare services. In February, 1955, the first *centre d'instruction à la guerre psycho-*

¹⁰ Testimony of Germaine Tillion presented at the trial of the F.L.N. commander of the Algiers area, and reprinted in *Encounter*, December, 1958, p. 19.

¹¹ A common argument against compromise endings of insurrectional war. See, for instance, Colonel Nemo, "A la recherche d'une doctrine," *Revue Militaire Générale*, March, 1958, pp. 345-346. Colonel Nemo, however, admits the theoretical possibility of such struggles ending in a compromise, a contingency he does not envisage in the case of nuclear war. See also Col. G. Bonnet, *Les guerres insurrectionnelles*, Paris, 1958.

¹² Hogard, p. 15.

logique was set up in Paris, followed by the formation of *bureaux psychologiques* in Algeria, which were primarily intended to teach French soldiers the political and social aspects of the North-African war. In April, 1956, the Ministry of National Defence instituted a *service d'action psychologique et d'information* (S.A.P.I.), and some months later the first units of the new 'Seventh arm of the Service' came into being, consisting of four propaganda companies—*compagnies de haut-parleurs et tracts* (C.H.P.T.)—of which three were stationed in Algeria and the fourth at Vincennes.¹³ In the summer of 1957 the *5ième bureaux* were revived (press, psychological warfare, national affairs), and inserted into the echelons of corps general staffs and of the military regions. Since July, 1958, this organization is capped by the *5ième section* of the General Staff, under Admiral Cabanier, whose duty it is "to direct and co-ordinate the psychological action of national defence."¹⁴

Another innovation is the establishment in Algeria of the *services administratives spéciaux* (S.A.S.), which are directed by the Delegate-General in Algiers (up to the time of writing, December, 1958, they have thus been under Army control; it is not yet clear how their position will be affected by General de Gaulle's measures to re-establish civil authority). The S.A.S. consist of about 600 Regular and reserve officers who serve as teachers, doctors, engineers, and 'native affairs' officers, run liaison missions in towns and villages for the general welfare of the Muslims, recruit and arm the local home-guards, allocate housing, and have in every respect done an outstanding job of administering large regions, "which were in practice scarcely administered at all before the rebellion broke out."¹⁵

But these schemes, which in Algeria a spécial correspondent of *The Times* has described as "reforms against the clock," may not succeed in preventing violence from breaking out. If the insurrection has not been contained and the rebels manage to reach the third, fourth, or fifth phase of revolutionary war, the army has a four-fold task.

(1) The protection of communications and of essential administrative and economic centres. This is to some extent an unavoidable duty, but as large numbers of troops are required and the effort does not directly contribute to the defeat of the enemy, it should be curtailed as much as possible. For military purposes, the importance of roads and railways can be overestimated. If possible men should either be moved by plane or helicopter, or should march, it having been estimated that a unit on foot is ten times less vulnerable than one that is motorized.

(2) Under any circumstance, protecting communications and bases only makes sense if it is followed up by measures leading towards control of the whole area, and

(3) its pacification. Experience has shown that these two tasks can best be accomplished by spreading and augmenting the network of small posts. These should be manned as much as possible by permanent garrisons, made up of soldiers with intimate knowledge of the surrounding territory and its inhabitants, trained in

¹³ Jean Planchais, "La 'septième arme' doit-elle rester l'apanage des militaires?" *Le Monde*, 23rd August, 1958.

¹⁴ Jean Planchais suggests that in Algeria there has been considerable conflict between the S.A.P.I.—a centre of adherents of *La Guerre Révolutionnaire* for whom "the Algerian rebellion is based on Communist concepts"—and North-African experts who see the war more as a specifically Algerian problem.

¹⁵ *The Manchester Guardian*, 13th December, 1958. See also the articles in *The Times* of 3rd, 4th, and 5th March, 1958.

guerrilla tactics and the gathering of information. The advisable strength of the posts depends on local circumstances. Commandant Hogard has suggested that the proportion should usually be one soldier to every 15 or 20 natives.¹⁶ The commanding officers must be aware of the cardinal need to win over the population, and if possible to mobilize it against the rebels. This again demands close co-operation between civil and military authorities, and the effective integration of political, administrative, social, economic, psychological, and military forces. Their teamwork is essential for solving the greatest problems down to such questions as whether and when a home-guard should be formed in a particular village. As these native defence groups, whose best members are often reformed rebels, gain strength and reliability, they release army units for other tasks. The army will be careful not to proceed with the pacification of new regions until its own base is secure. It might establish forbidden zones, from which all civilians are evacuated, and which are relatively easy to control with purely military means. It might also, if absolutely necessary, resettle entire communities so that these can be properly supervised, protected, and denied to the enemy.

(4) The army's fourth duty is to destroy the enemy forces. This can never be an aim in itself; it is only useful insofar as the dismantling of the rebel *infrastructure* is speeded up. The army's measures must therefore be guided as much by political and psychological considerations as by military ones—perhaps more so. The tactics employed are generally those of the conventional 'small' or guerrilla war. In areas that the army is not yet powerful enough to pacify, commando raids on specific objects, economic blockade, or the setting up of forbidden zones seem more useful than large expeditions, which cannot be carried out with sufficient secrecy and often leave deplorable effects on the population, "the troops having the tendency to consider themselves in enemy territory." Besides, the inevitable withdrawal discourages loyal elements and is always represented by the rebels as a defeat.¹⁷

To sum up, the French solution of the problems presented by insurrectional war may be characterized as a total effort, carried on aggressively in every area of human activity, demanding close integration of the different forces employed even to the point of eliminating the distinctions between civil and military authorities, while never ignoring the importance of offering the people an ideal round which they can rally. In the non-violent 'pre-insurrectional' phase, the enemy's manoeuvres can be parried by a suitable defence organization and by vigorous psychological measures. If violence has broken out the riposte must spring from the physical and moral mobilization of the people.¹⁸ At the same time, the morale of one's own forces needs to be extremely high. The soldier must meet his clandestine opponent with equal faith and determination. "Passion can only be fought with passion."¹⁹

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The conflicts in Indo-China and North Africa cannot by themselves explain why just the French should have analysed and elaborated the doctrine of *La Guerre Révolutionnaire*, and now put so much faith in its efficacy. Other European armies

¹⁶ Commandant J. Hogard, "Die legalen Machtmittel im Aufstandskrieg," *Wehrkunde*, November, 1957, p. 606.

¹⁷ Hogard, "La guerre révolutionnaire . . .," p. 23.

¹⁸ Captain A. Souyris, "Les conditions de la parade et de la riposte à la guerre révolutionnaire," *Revue Militaire d'Information*, February-March, 1957, p. 90.

¹⁹ Colonel Nemo, "L'organisation de la guerilla et le role des forces regulieres," *Revue Militaire Générale*, April, 1957, p. 510.

too have had to deal, and are dealing today, with insurrection and revolution. French history, however, enshrines two profound influences to which the contemporary doctrine is very closely related. The one nearer to us in time is the tradition of *l'Armée d'Afrique*. Differences between it and the army in metropolitan France were often even more strongly marked than those that usually divide home and colonial forces. Empire-building officers would naturally advocate extreme mobility in political and military tactics, and as could be expected such ideas were not always appreciated at home. To this must be added the strong sense of mission felt by many colonial soldiers, again a natural enough attitude in men who fought and lived among subject races, but heavy with implications as soon as they tried to impose their concepts of a regenerating élite onto the home army and France itself. That one of the first duties of an officer lay in educating and shaping society at home and overseas was dogma to Lyautey as well as to Gallieni; both moreover believed that no sharp distinction should be drawn between soldier and administrator. It was not the label but the man that mattered; he who was only a soldier was a bad soldier. The best means of pacification, Gallieni wrote from Madagascar 60 years ago, is the combined use of force and politics, and political action is by far the more important. Finally, both insisted that military and administrative authority should reside in the same hands, not only at the summit of the hierarchy but also on its lower levels.²⁰

It is precisely from the ranks of officers with long service in Asia and Africa that the theorists of insurrectional warfare have emerged. At first they met with strong opposition. As recently as 1954 students at the *Ecole de Guerre* were criticized for the extent to which experiences in Indo-China had influenced and 'deformed' their military judgment.²¹ Not until 1956 did acceptance become widespread and official. The following year appeared what is still the most complete study of *La Guerre Révolutionnaire*, when an entire issue of the *Revue Militaire d'Information* was given over to the subject. It opened with an introduction by Colonel Lacheroy, a specialist in the field, who after the *coup d'état* last May became General Salan's chief spokesman in Algiers.²²

A second force in French history that has particular bearing on the doctrine is the early military experience of the French Revolution. Some months ago Lieut.-Colonel Chalmin published an article which tried to show that the wars waged by the Assembly and the Convention shared many characteristics with *La Guerre Révolutionnaire*.²³ His definitions may occasionally be vague but several of his arguments are convincing. Certainly the campaigns of 1792 and 1793 were fought under the banner of ideals and ideas; and at first events to some extent reflected official propaganda. War was waged against kings and palaces, not against the people; great efforts were made both to indoctrinate one's own troops and to subvert the loyalties of foreign subjects with the principles of universal liberty and the rights of man. 'Limited' cabinet wars became swamped by the passions of ideological and national struggles, whose boundless power did not grow apparent for another century.

²⁰ Lyautey summed up his ideal of *l'officier-éducateur* in a famous article, "Du rôle social de l'officier dans le service militaire universel," in the *Revue des Deux Mondes*, 15th March, 1891, publication of which caused a temporary setback to his career. Gallieni enlarged the thesis in *Le rôle colonial de l'Armée*, Paris, 1900.

²¹ Vincent Monteil, *Les Officiers*, Paris, 1958, p. 177.

²² The number of February-March, 1957. It was in such demand that a second edition was printed. By August, 1958, almost all of the 48,000 copies had been sold.

²³ "La guerre 'révolutionnaire' sous la Legislative et la Convention," *Revue Historique de l'Armée*, Summer, 1958.

The immediate fate of French psychological warfare, however, as Colonel Chalmrin writes, was its nullification by military realities: the indiscipline of French units, the massacres and looting, the imposition of pro-French administrations—all this repelled the foreign populations that had been so assiduously courted a short time before. Cannons again outweighed slogans. Nevertheless the French Army always retained a certain interest in the problems of insurrection and subversion—one of its officers, Commandant Roquet, published a study on the subject as early as 1830—an interest that became decisively heightened by the tragic consequences of 1940: the German occupation and Vichy.

* * *

The French analysis of insurrection and its control contains so many familiar features that some observers may be tempted to see little difference between *La Guerre Révolutionnaire* and conventional means of dealing with revolts. Twenty-five years ago Sir Charles Gwynn described the problems of suppressing revolutionary movements in words that at first sight might have been used by any of the writers quoted earlier. Rebellion, he wrote, commonly implies "guerrilla warfare, carried on by armed bands acting possibly under the instructions of a centralized organization, but with little cohesion. Such bands depend for effectiveness on the capacity of individual leaders; they avoid collisions of a decisive character with Government troops. Their aim is to show defiance of Government, to make its machinery unworkable and to prove its impotence; hoping by a process of attrition to wear down its determination. Their actions take the form of sabotage, of ambushes in which they can inflict loss with a minimum of risk, and attacks on small isolated detachments. By terrorizing the loyal or neutral elements of the population they seek to prove the powerlessness of the Government to give protection, and thus provide for their own security, depriving the Government of sources of information and securing information themselves.

"The suppression of such movements, unless nipped in the bud, is a slow business, generally necessitating the employment of numbers out of all proportion to the actual fighting value of the rebels, owing to the unavoidable dispersion of troops and the absence of a definite objective. It becomes a battle of wits in which the development of a well-organized intelligence service, great mobility, rapid means of inter-communication, and close co-operation between all Government forces are essential."²⁴

The parallels are indeed striking, but reflection shows that they cannot be pursued too far. Insurgents today, in the French view, are led by a centralized command that can impose high degrees of cohesion and continuity on their operations; they are also far better organized and trained, tactically as well as ideologically, than their predecessors of one or two generations ago. Besides, traditional policy never tried to do much more than to maintain order by exacting passive obedience from the natives, while *La Guerre Révolutionnaire* postulates that the people's active co-operation must be won, not only to help defeat the rebels today but to produce immunity against renewed attempts at subversion tomorrow. It is this which entails the use of psychological warfare on a scale for which no counterpart can be found in the past. The tactful wooing of Moplah and Afridi leaders stands in about the same relationship to the treatment of the inhabitants of *Algérie Française* as a one-hour counselling session to a full-length course of psychoanalytic therapy.

²⁴ Major-General Sir Charles W. Gwynn, *Imperial Policing*, 2nd ed., London, 1939, pp. 11-12.

The advocacy of close contact between soldier and population forms another break with conventional measures. To be sure, General Gwynn states that in Burma between 1930 and 1932 "to a very unusual degree the troops were concerned with restoring confidence among the peaceful inhabitants quite as much by systematically establishing contact with them as by destroying the forces of disorder."²⁵ But 'contact' here means almost wholly the search of villages for arms and wanted men, thorough cross-examinations, and surprise visits of patrols, not the social-tutorial relationship envisaged by the French writers. This would in any case have been rendered impossible by the traditional preference for large mobile forces over networks of small permanent posts. It is superfluous to add that *La Guerre Révolutionnaire* foresees a degree of civil-military co-ordination going, for instance, far beyond the practice of British rule in India, which besides never renounced the supremacy of civil government for more than carefully defined and limited periods.

To have recognized that the overseas tasks facing the French Army after 1945 could not be mastered by conventional means alone is an undeniable achievement of the theorists of *La Guerre Révolutionnaire*. Situations have arisen which, though not new in all respects, contained so many novel factors in unfamiliar combinations that a thorough review of military fundamentals became essential. This duty was not shirked. The resultant theories show some inconsistencies, have not been worked out in all details, and even their advocates presumably do not claim to have found the final answer; but the doctrine is an important and provocative step in the endless codification of war.²⁶

What is certainly wanted are more exact definitions of the basic concepts—for instance, whether 'revolutionary' and 'insurrectional' war are really interchangeable terms; and if not, what precisely each means. The chief reason for this terminological fuzziness is an inclination to see Communism behind all such movements, either as directly instigating them or as working through nationalist parties which it will in due course replace.²⁷ Reference need only be made to Germany after the first World War, Spain in the 1930s, Palestine after the second World War, and Cyprus today, to show that this view is based on a comic-strip concept of history.

Apart from its reformulation of military principles in the light of contemporary developments, the French analysis has the merit of laying great stress on the importance of psychological warfare. No Western power had yet made full use of this weapon and it continues to be widely suspected, not always without reason when one considers some recent attempts at selling the democratic way of life to uncommitted peoples. Intelligently and objectively employed, however, it can achieve great results, as the British experience in Malaya has proved. Have the French shown a similar willingness to understand the other's point of view and to renounce when

²⁵ Gwynn, p. 330.

²⁶ A question occasionally debated is whether in view of its complete seizure of the individual, *La Guerre Révolutionnaire* should really be considered a form of 'limited' warfare. See, for instance, Colonel Nemo's *A la recherche d'une doctrine*, already referred to, which suggests that total war has two components, *Guerre Révolutionnaire* and nuclear war; and General Ely's articles in recent issues of the *Revue de Défense Nationale* and the *Revue Militaire Générale*.

²⁷ On this point the attitude of Commandant Hogard, Colonel Nemo, and their comrades is identical with that of such civilian figures as M. Soustelle, who regards "the Algerian war as part of a great world struggle against Communism." *The Times*, 3rd December, 1958.

necessary their own prejudices? An opposite tendency is suggested by their writings, of which Commandant Hogard's already quoted discussion may be considered typical. The psychological counter-attack, he argued, must oppose the rebels' perversion of values "with the superior moral code of the French." Certainly no one should dismiss the exemplary qualities of Western civilization; on the other hand it is parochial to suppose that they are acknowledged and longed-for the world over. The Muslims may prefer crude nationalism to liberty, equality, and fraternity; and the imposition of these not always perfectly presented ideals is just that—an imposition which people will resist insofar as it goes against their own profoundly held feelings and attitudes. Only if men find themselves in a totally restrictive society, as prisoners for instance, can they be thoroughly re-educated or brain-washed; and indeed the measures advocated by *La Guerre Révolutionnaire*, unless held in bounds by a firm respect for individual liberty, must logically lead to Chinese practices.

The proposition that the army is not only a fighting force but an agency of education and moral regeneration as well is fundamental to the doctrine. Every writer insists that the army must present the civilian population with ideals round which they can rally, since this alone makes possible the conquest of the people and thus the winning of the war. Here the obvious question arises whether one can really expect an army engaged in a difficult and treacherous campaign to be composed simultaneously of soldiers and evangelists. Are not the offences described by Colonel Chalmrin bound to happen in 1959 as they did in 1793? Is not the inherent contradiction between force and persuasion always rather greater than the possibility of their co-operation? In a talk last year at Chatham House, Edward Behr estimated that at least a quarter of the dead claimed by the French forces in their reports of engagements fought is composed of civilians. It is not surprising, he concludes, that "French ruthlessness in dealing with the rebellion has in fact driven the Muslim middle-class straight into the arms of the rebels."²⁸ More than one senior officer has complained that, training and exhortations to the contrary, the soldier in Algeria tends to ignore his psychological tasks, isolates himself from the natives, and pays attention to the business of fighting alone; and as the enemy does not wear uniform it is only too easy for innocent people to get hurt.

In the studies of *La Guerre Révolutionnaire* illegal methods are mentioned only as exceptions. "If it is true that certain blameable deeds were committed (deeds punished however when they became known) it is unjust to reproach the Army for occasionally making mistakes in doing a job that is not its own and in which it only obeys orders from the civilian authorities."²⁹ And, "unfriendly propaganda can find isolated instances, which in no way correspond to official directives and are severely punished."³⁰ Enough, however, is known of events in Algeria to suggest that these quotations fall short of reflecting the actual situation; nor are all officers equally willing to dismiss a problem that undoubtedly exists. General Pierre Billotte wrote, "On the subject of torture I am unequivocal: in whatever form, for whatever purpose, it is unacceptable, inadmissible, to be condemned; it casts a slur on the honour of Army and country. The ideological character of modern war changes nothing in this. On the contrary, in struggles of this kind, victory eventually falls to the more noble ideology; the greater respect for moral and human values constitutes

²⁸ "The Algerian Dilemma," reprinted in *International Affairs*, July, 1958. See also the special articles in *The Times*, already cited.

²⁹ Quoted in Monteil, p. 178.

³⁰ Souyris, p. 96.

one of the most effective means of gaining victory since it goes directly to the hearts of men who are temporarily hostile. Besides, the excuse heard occasionally that one tortured man may perhaps save a hundred of our own is not valid. First, in very few cases does the unfortunate prisoner possess information of such importance. Furthermore and above all, though this is a cruel duty, a commanding officer must not hesitate to expose his men and even the population under his protection to greater danger rather than make use of a dishonourable practice. A commander who lacks the moral strength for carrying out such a duty does not deserve to command French troops. The spirit of sacrifice is the cardinal virtue of the soldier."³¹ This avowal may sound antiquated and impractical, but it reflects that superior moral code which the theorists of *La Guerre Révolutionnaire* never fail to invoke and which they abandon only at the peril of growing indistinguishable from their enemies. The dangers always inherent in combining civil and military authority need not be dwelt on—occasionally they must be risked—but it may legitimately be asked to what extent acceptance of the rebel weapons—*infrastructure*, thought-control, torture—cripples those standards on which the hopes of victory are supposedly based.³²

More than anything else, those officers who seriously accept all tenets of *La Guerre Révolutionnaire* admire the ideological solidarity of their Chinese and Viet-Nameese preceptors, which superficially appears far stronger than their own. The rebels generally manage to secure not only a safe physical, but also a safe ideological base; the two, as has been said, are identical in insurrectional war. Undoubtedly France is more complex, more contradictory, much more difficult to mobilize, and some observers have begun to lose faith in what for long has constituted an essential factor in its make-up—"It is time to realize that the democratic ideology has become powerless in the world today."³³ Such dissatisfaction—in his recent book *Le malaise de l'Armée* Jean Planchais goes so far as to suggest an "alienation of feeling between the professional Army and the nation"—stems largely from the knowledge that since 1945 soldiers have been asked to do the impossible. But could Indo-China have been held even if France had been put on a full war-footing and kept there for years? And would it have been worth while?

This brings up a final question: what effect might a military élite with a sense of mission, and a lack of trust in the reliability of its base, have on this base? If the French Army were a revolutionary force its first move, according to *La Guerre Révolutionnaire*, should be to conquer and secure this base. But the Army—whatever the opinions held by some of its members—is not really, in its essentials, revolutionary; and one may expect the doctrine eventually to break up over the contradiction of imposing revolutionary methods on non-revolutionary organizations.

³¹ Letter to *Preuves*, October, 1957.

³² A question often thought to be unimportant. Two North-African officers recently stated: "The army, stumbling now and then as it must when using new methods (of psychological warfare), wants only to turn the enemy's own weapons against himself. What can be more natural in war?" *Le Monde*, 7th–8th December, 1958.

³³ Commandant J. Hogard, "Cette guerre de notre temps," *Revue de Défense Nationale*, August–September, 1958, p. 1,317.

A SIGNAL OFFICER IN NORTH RUSSIA, 1918-1919—I

By BRIGADIER R. CHENEVIX TRENCH, C.B., O.B.E., M.C.

THE British soldier in the field is fortified by the knowledge that he is fighting his country's enemies, and in the past that has generally been enough for him. Today he likes to know in addition what the war is about, and he looks for a simple answer. How simple the answer was in the Archangel campaign of 1918-19 may be judged by the reader who has the patience to follow this account. It does not claim to be history, capable of standing fire from historians. It is based upon personal records, on letters home, and on a memory that is reliable at least for impressions received at the time, while major errors of fact have, I hope, been avoided by reference to the published despatches, to Sir Winston Churchill's *The Aftermath*, written in the shadow of the events themselves, and to Field Marshal Lord Ironside's *Archangel*, 1918-1919, published 36 years afterwards. No official history has been published.



We must shed after-knowledge and see the situation as it appeared at the end of 1917. From August, 1914, till September, 1917, the Russian armies had fought as our allies against Germans, Austrians, and Turks. They carried crippling handicaps; corruption in high places, bad leadership, choked lines of communication and endless confusion behind the front, poor equipment and very little of it; and it was only their soldiers' stubborn courage, endless numbers, and apparently infinite capacity for taking punishment that kept them still in the field. The Tsar had abdicated in March, 1917; power was in the hands of the Social Revolutionary government under Kerensky, and the kindly English tried to see the event as a bloodless, enlightened, liberal revolt against a corrupt and effete autocracy. The Bolshevik rising of November lay in the darkness ahead.

The Russian armies, we knew, were in a bad way, but now surely they would be led with renewed strength into the fight. But the revolution did not inspire the Russian soldier to fresh effort. Instead, after three years of appalling losses, the stresses became unendurable. The front cracked under the hammer blows of the Germans, the agitator did his work, and the virus of dissolution spread until the armies, rotten with mutiny, collapsed in defeat and chaos beyond description.

In November, 1917, the Soviet Government, which had overthrown Kerensky early in the month, asked for an armistice, and at Brest Litovsk in the following March they were forced to accept savage, humiliating terms, dismembering European Russia. What mattered for us, locked in a struggle for survival, was that the new rulers in Russia claimed none the less to be still at war with our common enemies; Trotsky agreed to accept allied co-operation against the Germans, and we looked upon the Russians as our allies still. We needed above all that they should return to the fight: we needed it so badly that we thought it was possible, and this illusion had its place in the complex of impulses that was to lead us, each step following inexorably on its predecessor, into a campaign against the Bolshevik Government,

lasting for a year after victory in the world war, the sole object that took us to Russia, had been gained.

Other factors were at work. In the ferment within Russia there was taking place a miracle of history. Among the subject races of the Austrian Empire were the Czechs, whose men fought perforce in the imperial armies. Many thousands, who had surrendered or deserted to the Russians, found themselves shut off in a country that was dissolving in anarchy. They found a leader, Mazaryk, armed themselves at the expense of their captors, and grew into a compact, hard, efficient body, a nucleus of order in the womb of chaos. They knew what they wanted—to go home to Bohemia and to found a nation independent of Austria—and they meant to cut their way out and do it. News of their existence and purpose reached the outside world, and it was hoped that they would make for Archangel.

There was another ingredient in the brew. In the course of the war, in response to urgent appeals, we had sent munitions in great quantity to Archangel, and it was typical of the Russian administration that that was the nearest they got to the armies that needed them so sorely. If the Germans should reach this treasure there was little doubt that they would find means to clear it for use against us.

It was therefore decided in the spring of 1918 to send a force to Archangel; not indeed a mobile fighting formation but rather a military mission accompanying a diplomatic party, and made up of a large staff designed for all forms of liaison with allies, with a small body of infantry and supporting troops. The infantry were for the most part of C3 physical category who could be best spared from the locked battle in the west. The objects were given in the official despatch of the campaign as:—

- (a) Reconstruction of any available Russian or Allied forces in Russia to oppose Germany.
- (b) Prevention of access to the sea through Archangel or Murmansk should the Germans continue their advance into Russia.

In May, 1918, I was called home from the Western Front and put in charge of the signal communications of the expedition, which was assembling in great secrecy in the Tower of London under the command of Major-General Poole. I was given the acting rank of major. We knew little of what lay before us, and rumour grew. Officers had to take plain clothes, in case they should be wanted for security purposes, as if an Englishman in plain clothes, in any part of the world, could look other than an Englishman in plain clothes. Our code name was Elope.

On 16th June we sailed from Newcastle in a City Line transport, amid cries from the stevedores, "You're going to Rooshia." With us were a battalion of the Royal Scots, Gunners, Sappers, and Signals, which were then a branch of the Royal Engineers. The diplomatic mission was led by Sir Francis Lindley. The Signal company was commanded by Captain A. Rorke, R.E., who had under him 2/Lieutenant J. B. Wilson, R.E., and 51 other ranks. These included Company Sergeant Major Blackburn, an old Regular and a rock of strength, and Mechanist Staff Sergeant H. B. Nield, a first-class wireless technician, who gained the M.S.M. in North Russia and 22 years afterwards served in the 8th Army with the rank of captain. The technical resources of the company amounted to four wireless detachments, six telegraphists, four switchboard operators, and six linemen.

We were directed first to Murmansk on the Kola Inlet, and on 22nd June we brought up beside the quay in that port. Through the weeks that followed we had to adjust our ideas of a time for work and a time for sleep to the disturbing presence

of the sun in the sky for 24 hours in each day. Murmansk was an ice-free port, connected with Petrograd (now Leningrad) by a railway 800 miles long resting on swamp and tundra and usable only when these were frozen solid. In the port we found H.M.S. *Glory*, the U.S.S. *Olympia*, the French *Amiral Aube*, the Russian *Askold*, and a company of Royal Marines ashore. The cable from Great Britain to Archangel was led in at Alexandrovsk, on the west shore of the inlet.

It did not take us long to feel a certain chill in our welcome, and the Bolsheviks in the port made little attempt to conceal their feelings. The sailors of the *Askold* became so truculent that they had to be disarmed—in itself a strange act from one ally to another. The myth, in fact, had faded of a revolutionary government burning to renew the fight and welcoming our help. Our hope that the country's vast resources would not fall under German control now lay with the counter-revolution that was taking shape in widely separated regions. Early in July the local authority broke with the Moscow Government in favour of the allies. The Sailors' Revolutionary Committee no longer imposed its will and the Russian officers began to breathe again, no longer in daily fear for their lives. The formation of a Slavo-British Legion was begun, embracing anti-Bolsheviks of all kinds whom the tides of war had brought to that beach, all under the British command.

For Signals the most pressing need was to weld our 53 individuals, thrown together so recently, into a self-reliant field unit. A course of vigorous training ashore was started, including close order drill, strict inspections, football, recreational training, and weapon training, or in the homely language of the day, musketry. I was encouraged by a comment, only half in complaint, overheard as two men came off parade, "This unit's going up the straight." That was the intention.

Then I had to pay my respects to the Russian General Svegensseff, a Regular officer who had joined the Bolsheviks, and to the various commanders, naval and military, of the assembled Powers, meet their chiefs of staff and signal officers, and arrange co-operation in a score of matters. I was most kindly received, especially by the Americans.

On a hill three and a half miles from the port stood the masts of a large wireless station which, the Russians told us, had never been completed. I paid it a visit, accompanied by my interpreter, Sapper Judkevitch. We found a detachment of eight Russian soldiers, with equipment of the latest design, and two 250-foot steel masts. The work was far from finished and all was at a standstill. The men did not quite know which side they were on, but were glad to be told and were delighted to have visitors, and we parted on the best of terms.

After reporting the situation to the staff, I asked General Svegensseff for authority to take over the station and put it in working order, for we might need it, but he was reluctant and evasive and said that it was controlled by the Sailors' Committee. This opened vistas of indefinite stalling, so I went again to the station, this time with Lieutenant Richards, an interpreter in "I" Branch, 2/Lieutenant Wilson, Staff-Sergeant Nield, and 12 men of the signal unit, strong enough to mount a guard as well as to work at the set. I explained to the Russian in charge that we had come to help them finish the installation and left Wilson and his party, with no interpreter, to practise the unfailing magic of the British soldier in getting on with people. On a visit the next day I found a hive of activity and the greatest good will prevailing. Our men's rations, needless to say, were being shared. In a fortnight the station was in working order.

I have mentioned my interpreter, Sapper (later Sergeant) Judkevitch. He was a Russian, a man of education and good standing who had been studying electrical engineering in England when the war broke out. After several unsuccessful attempts he had contrived to enlist in the British Army and had served with R.E. Signals in forward communications on the Western Front. On demobilization he took British nationality and became Ralph Judson, and in the second World War he gained the M.B.E. and the rank of major in the Home Guard. He was for some years advertisement director of B.B.C. publications. It is not a career that anyone would have foreseen for a native of Viatka in central European Russia.

There was, along the Murman coast from Norway to the White Sea, a chain of signal stations, some of them with wireless equipment, set up to report to the Russian Government on ice conditions. Intelligence wanted to know something about them and so, of course, did I, but no local authority could tell us anything beyond the fact that they existed. The most helpful of those I interrogated was Peter Michailovitch Urief, who had been elected by the revolutionary sailors to be the local head of the department for coast communications. We exchanged hospitality, I presented him to General Poole and gave him a bottle of whisky, and we got on famously. This led to an arrangement that he should take me, with Richards as interpreter, on a tour of inspection of the stations along the coast. We went in a Russian patrol boat, manned of course by Bolshevik sailors, for there were no others, and mounting a 12-pounder gun. On the principle that you never can tell, I was provided with six Royal Marines and a Lewis gun, who added a solid touch to a slightly fantastic background and, in general, gave tone to the party.

We called at ten places, most of them coastguard flag signal stations. In four we found wireless equipment in various stages of neglect, decay, and incompleteness, with staffs long unpaid. All were surprised to find themselves being inspected by a British officer, but only at the most easterly, Yokanka at the entrance to the White Sea, did we receive a really sour welcome. My marines, throughout, were a great comfort to me.

The Murman coast from seaward, even in midsummer, presented a picture of savage desolation. The naked, forbidding cliffs of black rock with patches of snow offered no shelter and could be approached only with an offshore wind and in calm weather. A typical landing place was a flat platform of rock, from which steps led upward, and one stepped ashore as the boat rose on a swell. The Russian seamen were first-class boatmen and would bring the boat alongside at the perfectly judged moment, pulling, backing, and fending off with faultless skill and economy of effort. The land inshore was for the most part tundra, which thawed in summer like a sponge for a foot or two above the perennially frozen subsoil. It bore a tough, wiry, dwarf growth with a profusion of flowers and berries rejoicing in the endless daylight of their brief summer. No timber grew so far north and the few inhabitants burned driftwood and turf, real turf cut and drawn from the bog and, to my pleased surprise, there also called 'turf.' In that northern summer the myriads of hungry mosquitoes could make life a misery, and in the British forces all ranks received wide-brimmed hats with mosquito-proof veils.

As July drew to an end plans matured for a descent on Archangel. We were strengthened by a French battalion, and a new force, with the code name Syren, arrived to take over in Murmansk from Elope. For a figure of our total strength I quote from Sir Winston Churchill's *The Aftermath*. "Concurrently with this an international force of 7,000 or 8,000 men, mainly British and all under British

command, disembarked in June and July at Murmansk and Archangel." I spent much time in allied warships and with the French command in making signal arrangements for combined operations. Local signal duties were handed over to Syren, and Captain Rorke's company was withdrawn for intensive training and rehearsal of plans for the landing. On the 30th we learnt of an anti-Bolshevik rising in Archangel. A busy day followed and that evening General Poole and some of his staff, with warships and trawlers, sailed for the port. The force followed at noon on the 31st with a trawler and torpedo-boat escort. Our country had acquired a new enemy; our mission had changed its character and become part of a fighting force; we felt the pressure of history in the making, and the war, in our corner of the arena, seemed already to be about something different.

We had, after all, no fighting to do in Archangel. Our friends there had arrested and imprisoned the local Bolshevik government by a *coup d'état*, and no open resistance was attempted. We were held up by fog in the White Sea, but by the evening of 3rd August the force had landed. The headquarters ship, the *Stephen*, was at a quayside at Bakharitza, the dock area on the left or south-west bank of the Dvina. Archangel itself was on the right bank. The advanced guard was three miles to the south, at Isako Gorka. The tactical signal needs at this stage were simple, and my problems lay rather with the wider requirements of the whole allied set-out that was to be established in Archangel. The next morning I crossed the broad Dvina estuary to the city and sought out the British Consul. He helped me to get in touch with the local telegraph, telephone, and submarine cable authorities, and the Russian command and naval staff. Those were busy days. The original purpose for which our little force had been designed was submerged in a new role. This was to provide a screen, as far south as possible, behind which the new anti-Bolshevik social revolutionary Russian government could establish itself and raise and train its own army.

Our new title indicated our new task: we became the North Russian Expeditionary Force and, later on, Allied Forces, Archangel. The despatches tell us that the allied forces, in these early stages, were made up of contingents from Great Britain, France, America, Italy, and Poland, amounting to 14,000; Russians, mostly returned prisoners-of-war, numbering 1,500; and the Slavo-British Legion of about 3,000.

For the long distance line communications to the front and for the G.H.Q. and base telephone system in Archangel, we had to rely on the Russian administration. Here all was confusion and fear, double dealing and suspicion. No man knew whom he could trust, and at every turn we were met by baffling obstruction, formless but impenetrable. In desperation, with the help of our diplomatic mission, I obtained an interview with M. Tchaikovsky, the head of the Russian provisional government. There it was arranged that the telegraph department should be obliged, under formal statute, to accept the orders of the British command. Warned by experience I did not depart on receiving this assurance, but sat on until the edict was signed, sealed, and delivered. I do not know what the interpreter said, but I knew that I was not going to leave the room until all was completed. Thus protected, the head of the department, who was very ready to help, could plead *force majeure*, and matters began to improve. In the long run we were dependent on the willing co-operation of the Russians, and this we did our best to gain. There was one talisman for unstinting, friendly co-operation, and that was the steadying, reassuring, matter-of-fact presence of British other ranks. It never failed, and language appeared to be no obstacle.

It was evident at once that the White Russian Army, when it was formed, would need signal communications. The Russian command was ready enough to agree that

this might be a good thing, but could make no further contribution and had no doubt that we would see to it all. So a Russian Signal School was formed under the wholly competent and confident command of Sergeant Cooper, later promoted captain. Of course he could teach these Russians signalling. He was given a regimental signaller, a private of the Royal Scots, to help him, with Sapper Judkevitch as interpreter and assistant instructor. His first pupils were 15 linemen and operators of the telegraph department, hand picked in consultation with the department's head and then enrolled in the Slavo-British Legion. They were refreshingly keen and quick to learn. The original 15 taught subsequent courses, which in turn were used as instructors, and so the Russian signal units were built up.

I would visit the Signal School when I needed cheering up, and sometimes attended their morning parade. There, coached by Sapper Judkevitch, I would greet the parade with the old Russian salutation "*Zdorovo Molodtzi*," "Good health to you, lads," to be answered by a great shout "*Zdravja Jelaem Gospodin Mayor*," returning the good wishes.

The installing and working of G.H.Q. signal office in Archangel, the setting up of stores and workshop, liaison with Russian telegraph and telephone authorities, control of Russian wireless, training of Russian signallers, besides internal economy of the unit, all fell on the original 53, who were stretched to the utmost, with non-commissioned officers and sappers exercising authority far above their rank. My chief care was how they would stay the course until help arrived. When after two months the strain was eased by the arrival of reinforcements, my official record contains the comment, "The months of August and September after landing in Archangel imposed a great strain on all ranks in Signals, for which the best preparation was the company training and the emphasis on discipline and normal regimental routine that were enforced during the wait in Murmansk."

I was indeed sometimes concerned as to how I should stay the course myself, and I find in a letter written at the end of September, "What with the civil telegraph department, and stores and personnel for future organization, and ambassadors who want to talk to Lenin at once please, and censors and Intelligence and Secret Service enthusiasts, and the Navy with their wireless, and Russian wireless, there is a great deal to do. At present I keep Rorke and his subaltern up the line and carry on alone. My reinforcements should be here any day now, and won't I just sweat them!"

Our commander's first aim was to drive south before resistance had time to stiffen, and the problem of supply imposed two main lines for this thrust, one up the Dvina River and the other up the railway that led to Vologda. For this our small force of infantry, depleted by unavoidable duties in Archangel, had to suffice until the 339th Infantry Regiment of the United States Army arrived early in September. The tactical situation did not allow their employment as a brigade under their own commander, and the battalions were, perforce, dispersed between the two fronts and duties in Archangel and on the lines of communication. Their commander, Colonel Stewart, placed his signal platoon at my disposal, and ignoring calls for help from all directions, I allotted it as a unit to the railway front.

At the beginning of October 12 Signal officers and 26 other ranks arrived, and on 24th October a further 10 officers and 89 other ranks. Signals could now take shape as three companies, one for each of the two main forces on river and railway and one for G.H.Q. All three were made up largely of battalion signallers and, later, of Russians from the Signal School. The total came to 198 R.E. Signals, nearly 200 British and American regimental signallers incorporated in the Signal companies, and

190 Russians, a mixed bag of some 25 officers and 560 other ranks. Rorke became an acting major and Wilson an acting captain, and I found myself an acting lieutenant-colonel.

My reinforcements included Major Conway-Brown, whom I sent to build up a signal company for the force on the railway; it was called the Vologda Force, but its furthest reach fell short of that centre by nearly 200 miles. There I had found much going wrong; the American signallers, handled with too little understanding of their difficult position, had not settled down happily in the British organization and the whole wanted pulling together. Conway-Brown was the man to do it. Besides character and personality, he had long experience in Canada and many American friends. Rorke now commanded the Signals on the Dvina front and Allen, one of my reinforcements, those in the Archangel area.

The Signals reinforcements were no product of chance or guesswork at home, for I had had, in the days following our landing, the unusual advantage of drawing up my own war establishments and store tables. Thinking out the needs and casting them into proper form, on top of all else, was a gruelling piece of paper work.

The office work of the early months was made possible by the discovery of two typewriters, one with the English and one with the Russian alphabet, and of a young lady who could not only use them but knew a little English and had some sense. She was, I was able to write home reassuringly, a plain little thing. My clerk, Sergeant Todd, took everything in his stride. My billet was in a log house on the riverside, with big rooms well furnished in a continental style, and I breathed an air of wealth and elegant discomfort. The owners, a well-bred, cultured family, were embarrassingly kind. When I was working night after night into the small hours, they would come in the evening in case I felt lonely and chat by the hour, or ask me to their parties. I quote from a letter home, "Last night the people of the house asked me to have a cup of tea at 9 p.m. I was fool enough to accept, and only escaped with many apologies at 2 a.m. today, leaving them still talking." We spoke French, and I realized how much easier it is for two reasonably well-educated people to get along in that language if neither is himself a Frenchman.

We, fresh from England, felt an alien atmosphere, and sometimes remarked with surprise that our new friends behaved like characters in a Russian novel, without considering how much more surprising it would have been if they had not. They were highly intelligent, but cursed with a strange fecklessness, baffling and frustrating. When we looked at them we often wondered, not that there had been a revolution but that it had been so long postponed. The idea of their standing up to the Germans in the field seemed fantastic. They found us equally trying, indeed incomprehensible. We had to get on with them, but they made heavy drafts on my slender reserves of charity. I found relief by letting off steam in letters home, and the following, written in November after half a year's experience, is an example. "I have not met the peasants as a class, but the officials and town birds and ex-officers, etc., are simply decayed, morally and physically. They are almost impossible to help because they are so suspicious of one another (quite rightly) and of everyone else (from force of habit) and almost incredibly indolent, and crooked and shamelessly on the make, and very, very touchy in punctilio. And they all live in the most stifling fogs and have white, squidgy faces, and smell. It's very hard not to be a little insular and unsympathetic. . . ." There were notable exceptions; patriotic, devoted men of unshaken integrity, who stood out like beacons.

(To be continued)

THE SCHLIEFFEN PLAN—NUCLEAR WAR AND THE SOVIET AND GERMAN ARMIES

By ALFRED KLINKRADE

"Bewegung ist Sieg, Halten ist Vernichtung"

"We are of opinion that the design of future war will be very different from that of past wars. Soviet strategy is not based on principles preached by Clausewitz, Leer, Foch, and others, but is concerned only with the study of conditions as they really are today. We remain convinced that weapons of mass destruction can in no way affect the importance of land armies, sea, or air fleets. Without a strong army, navy, and strategical air force, one cannot undertake modern war."—*The Great Soviet Encyclopedia*, 1956.

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ALTHOUGH Captain Wynne's most interesting series of articles¹ have brought out clearly the menace of Soviet strategy, any exercise which aims at relating the tactical theories of von Schlieffen to weapons of mass destruction must be dismissed as military pedantry. Moreover, the tactics and organizations he ascribes to the Soviet Army and the Bundeswehr are not in accordance with fact.

Captain Wynne states that the Russians and Germans have accepted von Schlieffen's doctrine as the basis of their military theory, but since he does not explain what are the tactics and organization of these armies, it is difficult to follow the train of his argument. He goes on to make recommendations on the organization and tactics that the British Army should adopt. By inference one is led to assume that he supposes that the Soviet High Command and German Ministry of Defence share his opinions, which views are apparently these :—

- (a) that the defence should rest on the fire-power of tactical nuclear weapons (and that presumably fire-power can take the place of ground troops) ;
- (b) that tanks are outmoded ;
- (c) that ground troops (he stipulates infantry) should be provided only in sufficient numbers to afford close protection to the missile launching sites ;
- (d) that attacking enemy forces should be encircled by mobile reserves of fire-power.

The Soviet High Command has never made a secret of its theory of strategy and tactics for nuclear war. Although it asserts, as Field-Marshal Montgomery has done, that the tactics of the land battle have been radically affected by the introduction of nuclear weapons, it remains convinced that wars, whether they be nuclear or non-nuclear, will be waged by air and sea fleets and large ground armies. Furthermore it has stated repeatedly that nuclear wars will be fought by tanks and that the tank arm is the arm of the future. Professor P. M. S. Blackett, in his book *The Military and Political Consequences of Atomic Energy*, says, "Relatively few atomic bombs would bring considerable added military power to a nation already strong in conventional armaments, particularly land forces, but a large number of bombs would not add decisively to the military power of a nation deficient in conventional armaments and land armies, since the lack of power of follow-up drastically limits their value," which might be held to bear out the Russian view.

¹ See JOURNALS for November, 1957, p. 488 ; February, 1958, p. 40 ; and May, 1958, p. 215.

Colonel Caiger-Watson brought out clearly in his article² the point that Soviet and German military thought and tactics are in some respects similar. Above all they are essentially offensive in character. Wars are not won by defensive fire-power alone, whether this fire-power be the machine-gun of the first, the artillery of the second, or the nuclear missile of the third world war. Wars and battles are decided by the assault of fire-power, air, and ground armies all acting in concert. Fire-power—whatever its source—must be linked with the manoeuvre of ground forces, and one without the other is useless. This is as true today as it was in 1914, and is, and always has been, fundamental to both Russian and German tactics. By no stretch of the imagination can the nuclear missile be expected to provide both fire-power and the complementary ground manoeuvre, yet this is exactly what many military theorists are asking from it today. Although in nuclear war the possession of the weapon will allow the reduction of one's conventional artillery support, it must not be regarded as a comparatively inexpensive substitute for ground forces nor, if one's enemy is provided with efficient tactical nuclear delivery methods, must one expect the weapon to redress an inferiority in strength of ground forces.

Ground forces will obviously be unable to fulfil their role on the battlefield unless they are endowed with a very high degree of tactical mobility. In future war, ground operations will be developed at lightning speed, and unless armour, infantry, tactical nuclear rocket launchers, and supporting arms have the manoeuvrability necessary to exploit rapidly the effects of the nuclear missile, ground forces will prove to be quite ineffective. Moreover, in this mobility lies safety. Because of the difficulties in acquiring information concerning nuclear targets, mobile forces are fleeting targets which are extraordinarily difficult to engage. This mobility must in addition be such that it will permit formations to disperse and concentrate at will, and to move rapidly by day and by night, independently of roads, tracks, and rivers. Without this mobility armies are so ineffective and vulnerable that they must inevitably be destroyed.

If tactical mobility is the first requirement of ground forces in nuclear war, then armoured protection is the second. Unarmoured transport and equipment are likely to be speedily destroyed by the heat and blast effects of the missile, and unarmoured vehicles afford little or no protection to crews and passengers against immediate and residual radiation. On the other hand armoured vehicles, and in particular tanks, are virtually unaffected by fairly close nuclear strikes. Tank regiments therefore, on account of their mobility and armour, are ideally suited to the conditions of nuclear war, but since tanks must operate together with infantry, and with nuclear and conventional artillery, all arms must be provided with tracked and armoured vehicles. Any defence in nuclear war based on the use of prepared and dug positions by dismounted troops (irrespective of whether or not it is backing up an obstacle or nuclear fire belt) is doomed to rapid and overwhelming defeat.

Immunity from the enemy's nuclear counter stroke can be sought in a number of other ways. The first and most important task is to locate and then to neutralize or destroy his missile delivery equipment. Good intelligence is required, and the destruction can be effected by air and rocket attack using nuclear or high explosive warheads, by surprise ground assault, and by *coup de main* parties. The targets for such attacks should include field headquarters, observation posts, and communication centres, as well as airfields, rocket launchers, and artillery. While

² August, 1958, p. 346.

the nuclear fire fight is being developed, action must be taken to protect one's own delivery systems, and this may be done by using large numbers of mobile rocket launchers and atomic guns, and taking special security measures to guard airfields, launchers, guns, and headquarters. The most vigorous counter-action must be taken against enemy air reconnaissance sorties and deep penetration patrols.

Another method by which troops become less vulnerable is by dispersion, and this is being forced on the armies of all nations. Wide dispersion, however, is purely a protective measure and can only be temporary, since some degree of concentration is required for the attack and counter-attack. When out of contact, therefore, troops are likely to be dispersed and concealed, concentrating for movement or assault under cover of mist, cloud, or darkness.

In order to destroy the enemy forces, accurate and early information of enemy intentions, concentrations, and movements is essential, since without this information one cannot employ one's own nuclear fire-power. Air reconnaissance and a favourable air situation are also essential to the collection of this information.

Another problem which will be most difficult to solve, but which will certainly present itself, is the engaging by nuclear fire of close-quarter targets. Once opposing armies come into contact and become closely enmeshed, swift infiltration and deep penetration may transform the battlefield into a rapidly changing kaleidoscope. When the enemy is kept at arm's length it may not be difficult to engage him with the weight of one's nuclear fire-power, provided of course one knows where he is—and this is the difficulty—but if armies become entangled and operations are fluid and fast moving, situations will arise when higher commanders are unable to locate either the enemy or their own troops. In such situations units and lower formations must rely on the fire-power of conventional arms—on tanks and armoured infantry—and on their own mobility either to destroy the enemy in close combat or to inflict a local defeat on him so that rapid disengagement and final destruction by nuclear missile can be effected. Such tactics can of course only be carried out by armoured and highly mobile troops.

In nuclear warfare, ground has probably much less tactical significance than hitherto. Ground that may be worth holding is also worth neutralizing by nuclear strike. The denial of axes and routes is unlikely to hinder unduly an enemy who can move across country. Natural obstacles, of course, will have their uses and may delay, but too much faith should not be placed in the defence of river lines, particularly if the enemy is well found in amphibians, rafts, helicopters, and airborne troops. Airfields and bases may make ground important, but this is a weakness which should be eradicated by the preparation of numerous alternative sites. Supply stocks should be dispersed in depth all over the tactical area. That some should be destroyed or captured is inevitable, but this is preferable to tying down formations to the defence of areas of ground. In nuclear war victory can be won only by surprise and the rapid offensive manoeuvre of ground troops in concert with the fire-power of nuclear weapons and air power.

Nuclear war is likely to start with little or no warning. It will be waged at a furious pace, and campaigns may be decided in days rather than in weeks or months. Morale will be subjected to a sudden and most severe strain and can be maintained only by training and psychological preparation. Junior commanders must be trained to use their initiative and, if without orders, to attack whatever the circumstances and however greatly they are outnumbered. Battles will be won by the tank onslaught, not by troops skulking in holes in the ground.

The most noteworthy feature in the post-war Soviet Army has been the development of the tank arm, and since 1946 there has been a disproportionate increase in armoured formations at the expense of infantry. Moreover, the main fighting arms are being equipped with armoured personnel carriers and armoured and tracked prime movers to enable them to move at tank speed.

Trends in the development of the post-war Soviet Army are—or should be—well known in the West, but ill-informed opinion sometimes considers that the adherence to traditional organizations and the continued production of very large quantities of conventional arms signify that military thought in the Soviet Union has not progressed since 1945. One would indeed be very foolish to imagine that the Soviet High Command is any less knowledgeable than the Defence Ministries of the West on the subject of nuclear missiles or their delivery methods. The Soviet High Command is as well fitted as the high command of any other State to prepare its forces for future war, and one of its main characteristics has always been its clarity of vision. Self criticism is an intrinsic part of the Communist creed, and the Ministry of Defence in Moscow is no doubt fully aware of its own weaknesses and those of its armed forces, and will obviously take every possible measure to eradicate them. It must therefore be assumed that it has also conducted exhaustive trials on the destructive effects of the nuclear weapon and on its employment in the nuclear battle.

In 1957 the Soviet Minister of Defence made a public statement in which he ridiculed that military theory which postulates that wars or campaigns would be decided by nuclear weapons alone. In this statement he sneered at advocates of push button warfare, and said that land battles would be decided by land armies. A further public statement was issued in 1958 which said that land battles in nuclear war would be fought with tanks.

From the Germans the Red Army learned that success depends on speed of movement. Field-Marshal Erich von Manstein has said that the safety of tank formations operating in the enemy's rear depends entirely on their ability to keep moving. Once they come to a stop they will be immediately assailed on all sides by enemy reserves. In this nuclear age they will be assailed in addition by nuclear missiles. By rapidity of movement, by operating at night or in conditions of poor visibility, by driving deep into enemy positions so that commanders cannot distinguish friend from foe, the Soviet Army probably hopes to gain immunity from the nuclear counter stroke. Moreover these battles will undoubtedly be fought not in training areas but in regions thickly populated with civilians, the nationals of Allies, and this is a factor that the Soviet Army is likely to exploit to the full.

Of present German thought I have said little but I can offer this. The German, like the Russian, is aggressive even in defence, and he has been trained for so long on the tactics of fire and movement that tactical mobility means everything to him. He could on no account endure the tactics advocated in Captain Wynne's articles on the Schlieffen plan. His faith in the value of the tank and armoured infantry in future war remains unshaken, and in this his views are the same as of those of the Russian.

Tanks and armoured infantry are essential for the ground campaign in nuclear war. Although the future is uncertain, one factor remains constant. A Power which is well provided with armoured formations can wage any type of war, whether it be nuclear or non-nuclear.

MODERN SEA-AIR STRATEGY AND SUBMARINE WARFARE—I

By ADMIRAL ELIS BIÖRKLUND, ROYAL SWEDISH NAVY

CONDITIONS at sea cannot be judged without taking into account the situation in the air above it. This is particularly true of those nations whose grand strategy calls for a maritime strategy of a blockading character. But for other countries with long coastlines, too, the operational connection between sea and air weapons has been greatly accentuated by the technical development in our nuclear and missile age. Such a connection is indispensable in order to build up a modern coastal waters strategy.

Intermediate range ballistic missiles (I.R.B.M.) already influence the world situation and in some six to ten years the intercontinental ballistic missiles (I.C.B.M.) will probably span the oceans with a certain hit probability as regards very large fixed targets. But under this 'sky war,' on and near the surface of the earth, warfare with conventional weapons is likely still to play a very prominent part—a great part in unlimited and a dominating part in limited wars.

However, since more than 70 per cent. of the world's surface is water, and missile weapons capable of reaching any part of the earth's surface from ships or submarines at sea are being developed, a radical change in grand strategy will obviously create new forms of sea-air strategy. We must try to picture what a future war would probably be like, and it is of fundamental importance that the changes in the modern aspect of warfare should be understood by the politicians who vote the means for national defence.

In analysing this future strategy it becomes clear that three different types of sea-air strategy will exist. Of two offensive kinds, one is based on the use of heavily armed task forces able to strike heavy blows against the enemy's forces, the other on submarines armed with missiles. A third kind is a defensive sea-air strategy based on naval and air forces in defence of national coasts.

Let us first look at those three branches with regard to sea and air operations, including submarine attack against warships, and in a subsequent article investigate the possibilities of a future submarine warfare against sea-borne trade.

OFFENSIVE SEA-AIR STRATEGY BY TASK FORCES

Heavily armed task forces will be the main offensive arm of the great naval Powers. In this well-combined system each link supports the next. An aircraft carrier represents both a mobile airfield and a missile base which can be rapidly placed at a chosen spot at the desired moment, thus providing enormous operational advantages.

The basic principle of this kind of warfare is the ability to deliver hard blows against the enemy's naval, air, and coast defences, concentrating a maximum of power in a minimum of time. Ship-borne fighters and modern fleet escorts provide a fair degree of liberty of action on the part of the attacking carrier task force. Ship-based aircraft and missiles can hit targets far inland in the enemy's country, destroying his production of submarines and aircraft, and his missile bases and factories. To block the enemy's naval bases is the best way of preventing enemy ships and submarines putting to sea. Present and future weapon development allows a more offensive strategy than during the last two World Wars, and

even gives the possibility of deep penetration into enemy centres of great strategical importance. A combination of ship-borne bombing and missile strategy may well solve many difficult problems.

It is evident that an alliance with a sufficient control of nearly three-quarters of the world's surface must possess great possibilities of utilizing such a future sea-air strategy by sending rapidly very strong maritime forces to all points where trouble is brewing. The carrier can establish reasonable bases off those coasts where land bases are not politically possible. Such task forces can be used also for peaceful strategical aims. Most of us, for example, can appreciate the political importance of the U.S. Sixth Fleet in the eastern Mediterranean or of the Seventh Fleet in the Formosa Straits.

But what are the realistic foundations for such a strategy?

The carrier will be able to launch I.R.B.M. missiles and can launch long-range reconnaissance aircraft, probably with TV apparatus. Fighters with air-to-air guided missiles can combine with the missile support ships, the destroyers, and the frigates, all armed with ship-to-air guided missiles with nuclear warheads, to hold any enemy air attack beyond decisive range. Carriers armed with missiles, and carrying only a minimum of aircraft, will have greater liberty of action since time will not be wasted by landing-on a lot of aircraft after an operation.

Information of the enemy is facilitated by reconnaissance aircraft, by the carrier's own radar covering about 100 miles (180 km.) in all directions, and by the fact that the carrier's electronic capacity provides real electronic control of a great area at sea. New carriers can also be equipped with interceptors, such as the Bomarc (250 miles ; 450 km.), an unarmed aircraft, which can launch rockets and missiles and may employ anti-missile missiles (Boeing and others). When we consider that reconnaissance aircraft radar can look about 200 miles (360 km.) ahead, it becomes clear what an enormous fighting capacity and operational faculty is concentrated in the task force system. Moving rapidly in dispersed order, protected against submarine attacks by surrounding escort and support vessels, and in the future also by submerged high-speed submarines with modern hydrophones, the task force is well protected. Naturally, a carrier can be sunk, but in modern conditions its security is considerable.

The task force system has been built up by American experiences in the Pacific and other allied knowledge, by successful American and British carrier operations in the Korean War, and by large-scale N.A.T.O. exercises since that time. The perfection of the system is a goal of great importance for an eventual naval war in the northern Arctic Ocean, the North Sea, the Mediterranean, the Indian Ocean, the Pacific, or elsewhere. But will the great carriers not suffer from the development of the I.R.B.M. and the I.C.B.M.?

The I.R.B.M. have practically no hit probability against fast-moving ships in dispersed order, and all experts recognize that ships at sea are much more difficult to annihilate with bombs than air bases on land. This will be even more true of I.C.B.M. when they become operational. As regards the smaller missiles, we must go into some detail in order to understand the situation as it may develop in the near future, naturally remembering that a ship can carry only a limited number of the missile types mentioned below and not all of them. The general picture of the near future is as follows.

Many American and British carriers and cruisers have the Regulus I (500 miles ; 900 km.), will soon use the Regulus II (1,000 miles ; 1,850 km.) and in a year or

two may have the Polaris (1,500 miles ; 2,700 km.). Russian cruisers may reply with the J-1 (370 miles ; 600 km.), or in some years the J-2 (470 miles ; 850 km.), and later with a new J-3 (perhaps 400 miles ; 720 km.) which seems to be in production. This indicates a Western qualitative superiority.

The Soviet has no aircraft carrier, while the Western carriers and some smaller types of ships may use in the anti-aircraft role the Talos (70 miles ; 120 km.), the radar-guided Terrier (20 miles ; 36 km.), and the Katie and other weapons from 16-inch guns. Destroyers may employ the Tartar (14 miles ; 25 km.), the Petrel (10 miles ; 18 km.), the new Rat (5 miles ; 9 km.), a rocket-assisted torpedo, and some other weapons. British carriers and destroyers use the Seaslug (18 miles ; 32 km.). If we add the Bomarc, the carrier can intercept supersonic enemy aircraft. Information pertaining to Russian destroyers is contradictory. An older type of missile Comet-1 (90 miles ; 165 km.) may be substituted by Comet-2 (550 miles ; 1,000 km.). In a struggle between surface ships, Russian forces would seem to have small chance against Western task forces. Both sides naturally have target-seeking torpedoes.

Russian bombers have two types of special weapons in development against Western ships, of rather uncertain quality, while the U.S.A. has the Petrel, which drops a target-seeking torpedo near the target ship, the Hopi in development, the Rascal, Zuni, Corvus, Bulldog, and Wagtail. In conjunction with the corresponding British types, this seems to give a decisive Western advantage.

In the air-to-air struggle the Western Sidewinder (7 miles ; 12 km.) has proved to be a good weapon, its successor, the Diamondback, perhaps better, while the supersonic Sparrow I (5 miles ; 9 km.), the French 5103, and the new Sparrow III (8 miles ; 14 km.) are complemented with a lot of short distance missiles. The American Goose is important and is said to reach great distances against enemy aircraft (2,000 miles ? ; 3,600 km. ?). On the Russian side a new interceptor is in development, but until now the M-100 A (3, 4 miles ; 6 km.) and the rocket-launching interceptor I-2 complete the picture, which is in no way an advantage for the East. However, it must be admitted that new development may somewhat correct the image over a Western task force's offensive. Totally there are beyond all doubt great possibilities for such offensive operations if the task force avoids approaching too close to the Russian coast where guided missiles, rockets, mines, and torpedoes might eventually turn the scales.

Two conclusions may in my mind be made : first, the considerable advantage of missiles with a range so much greater than conventional weapons, and secondly, the possibility for Western task forces to blow out of the air Russian aircraft from areas where strong task forces are in operation. This last possibility has a considerable influence on the efficiency of Russian submarine attacks against Western warships. What are the fundamentals of this strategy ? What is the situation to look for in the near future ?

The nuclear-powered submarine has advanced rapidly in the U.S.A. and many such submarines will be operational in 1960, and here the Soviet lags behind. Of the Western submarines, some of the large ones already have the Regulus I (500 miles ; 900 km.), new submarines in the "Halibut" class will in 1959 be provided with the Regulus II (1,000 miles ; 1,850 km.), or from 1960 with the Polaris (1,500 miles ; 2,700 km.) carrying a megaton warhead. A submarine of 6,000 tons can carry 16 Polaris missiles. Smaller Western submarines use the Polaris II (630 miles ;

1,200 km.). A new weapon called the Subroc, like the Rat and the Katie, can be launched from torpedo tubes and is a good attack weapon against enemy submarines. The Petrel, Rat, Dove, and Lulu also are good anti-submarine weapons.

In the Soviet Navy some submarines seem to have a special type of the Comet-1 (90 miles; 165 km.). The Comet-2, now in production, may be operational in 1961-62 (550 miles; 1,000 km.). But many Soviet submarines use instead the Golem-1 (360 miles; 640 km.), which is towed to the selected launching area for operations against land targets. A Golem-2 (probably of 1,000 miles; 1,850 km.), in which three missiles are towed, is in production and some other types of missile have also been seen in submarines. These weapons are important and the new W and Z class submarines will be armed with the Comet-2 or Golem-2.

Submarines can already launch missiles against enemy aircraft from a submerged position, which may make the use of aircraft less likely in anti-submarine warfare. These are realistic facts on which any future sea-air strategy should be built.

If we add to these the usual weapons, which the naval and air manuals mention, it is clear that the Western Powers dispose of so great a superiority at sea that an offensive sea-air strategy is well founded. This will be a global sea-air strategy, where weapons from task forces can reach strategically important targets at a great distance, which will enable a task force to achieve results without coming within the reach of the enemy's coastal batteries. This must alter a good deal of the usual thinking in relation to defence and to the penetration of narrow waters. We must see that future strategy is conceived on the grand scale.

The number of Western carriers and missile cruisers is increasing. The U.S.A. has 40, Great Britain 17, including those building and in reserve, and France will add two to her existing three. Conditions in the Mediterranean and in other parts of a British and French 'Commonwealth' undoubtedly call for aircraft carriers. In time of war the Western Powers could certainly set up at least 20 great task forces with two or three carriers in each force, while the Eastern Powers have no such potentiality.

Attack on enemy installations far inland, destruction of harbours, air and naval bases, and factories, the blocking of outlets to the oceans and in driving enemy forces from certain sea areas will certainly bring important strategical results. Such a strategy must also influence land warfare by its flexibility in landing (from helicopter carriers) commando troops and army units, by supplying them after landing, and by supporting their advance inland. Task forces are equally excellent instruments for defence against enemy invasion fleets. And as the carrier carries weapons for both nuclear and non-nuclear warfare, the task force system is operational both in total and limited warfare and enables task forces to serve peaceful strategical aims. Air bombing and the use of the large missiles (I.C.B.M. and I.R.B.M.) can easily be combined with a task force strategy.

The size of modern carriers and their need of great logistic support for maintenance is compensated for by their great concentration of offensive and defensive power. It is a strategy that can only be employed by the richer nations with great fleets of surface vessels, but it can give to those Powers the best solution of the sea-air strategical problem. The carriers of the Western Powers can in the future take the place of land bases in countries where the security of such bases is not sufficiently guaranteed. Floating and movable air bases must give a better security

against enemy surprise attacks if it is combined with a constantly changing aspect and a permanent war preparedness.

This dynamic operational capacity may be combined with an offensive submarine strategy—now that even the northern Arctic can be used—in areas where the combination of these two can be adapted to the particular conditions existing in different parts of the world. This idea will, in my mind, give excellent means for an encircling grand strategy.

OFFENSIVE SEA-AIR STRATEGY BY SUBMARINES

The Soviet maritime strategy is based on co-operation between missile-armed submarines and reconnaissance aircraft based on land, a less costly system than the task force system but on the other hand much inferior in striking power. The Soviet theory that the great missile-armed submarine will be the capital ship of the future is obviously based on ignorance of naval strategy on the oceans. Such submarines cannot take the place of the carrier of the Western Powers.

But from the Russian point of view the submarine system is logical for three reasons. First, because of the Soviets' great inferiority in surface vessels; secondly, because of the fact that Russia has few good harbours on the coast of the great oceans; and thirdly, because of the geographical difficulties, which limits movement between her four widely separated fronts, in time of political tension or war, to submarines.

The Soviet grand strategy is combined in a continental expansion over land in different directions and an offensive sea-air strategy on the high seas, utilizing the support of Communist world co-operation. In its naval aspect such a strategy has the great disadvantage that their submarines must rely on shore-based aircraft to find their targets at sea, and thus risk becoming 'blind' if the reconnaissance aircraft are driven off by the task forces and their heavy air weapons. The aspect of commerce destruction will be considered in a second article, but here we must remark that the possibilities of finding and attacking warships at sea are likely to be much diminished. A heavy submarine attack through a protective screen of modern escorts is not lightly to be undertaken. Naturally there will be some successes, but hardly to a point which can decisively influence strategical conditions.

As the modern submarine weapons have already been mentioned and anti-submarine warfare belongs to the second article, we can here directly consider the probable consequences of an offensive sea-air strategy of the Russian kind.

Evidently such a strategy could be very irritating to Western fleets, will make necessary a great protection system which costs a good deal of money, and will call for the construction of new ships to replace those sunk. A glance at the map of the world shows that an astonishing number of great towns, military bases, and industrial centres lie within 300 miles (540 km.) of the coasts. The Comet-2, the Golem-1, and naturally the greater Golem-2 all reach more than that distance. With the Golem-2, Russian submarines from the Pacific and the Atlantic can reach all parts of the U.S.A., even if the hit probability is uneconomic. Later on Russian I.R.B.Ms carried in submarines will increase the danger.

A submarine offensive strategy, however, cannot protect Russian communications on the high seas, even if submersible merchant shipping is constructed in the future. It cannot be used for peaceful strategical purposes, and is of little advantage in limited wars. As will be shown later on, a submarine war has no deadly effect if it is not combined with unlimited warfare.

From a Russian point of view, however, this strategy could be useful as a threat before the outbreak of a war, could force the Western nations into very expensive control measures, and might conceivably induce some nations not to join the Western camp. Russian submarines can be moved to different parts of the world.

DEFENSIVE SEA-AIR STRATEGY

It is only natural that when distances between antagonists diminish, when radar and other means make it possible to survey the whole theatre of war, and where shoal waters make the use of submarines problematical, the character of a sea-air strategy must alter its appearance. This calls for a third kind of coastal waters strategy for the medium and smaller nations, and also for the coastal defence of the great naval Powers. Such a strategy may, however, in local wars, include tactical offensive operations while remaining strategically mainly defensive.

The greatest influence of radar is that the old difference between day and night operations largely disappears. A high degree of preparedness must be constantly kept up, for the smaller distances invite an air strategy of immediate attacks against air and missile bases and important military centres. As missile weapons on one's own coast have not a sufficiently economic hit probability against enemy ships at sea at high speeds, there must exist a form of naval defence which can keep enemy missile-weaponed submarines as far away as possible in order to diminish their efficiency. Here submarines with periscope radar, operating far out at sea, will, in co-operation with aircraft, give the necessary early radar warning of enemy attacks by air or by sea. Such submarines are likely to have target-seeking torpedoes with which to attack enemy surface vessels and submarines and, if they are themselves attacked, torpedo-missiles which, like many existing types, can be fired submerged against enemy aircraft (American Subroc, Russian Golem-3, and others). The reconnaissance aircraft must have high speed and suitable air-to-air missiles.

This indispensable warning system is naturally complemented by radar and radio D/F stations, electronic devices, and sonar buoys near the coast. As the air arm of the medium and smaller countries must of necessity be numerically inferior, it is logical to reserve their main air forces for aims of such importance that they provide sufficient compensation for the inevitable losses they are likely to incur. Therefore submarines are an essential part of any sea-air strategy directed to the defence needs of the smaller maritime nations.

Minefields can to some extent compensate for power inferiority if sea depths allow the use of them. This assumes surface craft or submarines that can lay mines and protect mine-laying operations to a certain distance from the coast. Offensive mine-laying must obviously be left to submarines and aircraft.

Early warning chains and the minefields will give some protection against enemy coastal raids. It is evident also that in narrow passages, such as the English Channel, Gibraltar, the Dardanelles, the Baltic Sounds, Panama, Suez, Persian Gulf, Malacca Sound, and so on, special conditions will increase the importance of coast fortifications.

An important problem of sea-air strategy is the protection of naval forces against air attack. For this reason task forces have their own fighters and missiles. Russian submarines while on the surface must have surface and air protection, and most medium and smaller navies have their own shore-based fighters. These aircraft, however, have too small an endurance in the air to have more than a limited protection value. Efficient ship-to-air missiles are nowadays more useful. Such

self-protection gives to a fleet greater operational freedom, but is sufficient only if those missiles on vessels surrounding a naval force have a range great enough to allow an attack on the enemy aircraft before the latter can launch their missiles, rockets, or bombs against the naval force itself. Modern missile development certainly allows such a defence. The old idea that naval forces are vulnerable because they cannot defend themselves from air attack in good time is antiquated and incorrect. In very important operations of short endurance, however, a modern sea-air strategy still calls for the co-operation with the naval forces of attack aircraft with suitable air-to-air missiles.

Three significant facts are often disregarded. The first is that ships at sea can be successfully attacked only by guided missiles of a moderate supersonic speed. The second is that ships' guns and modern missiles are internationally recognized as very efficient against attacking aircraft and missiles at the relatively short ranges of action at sea. And the third is that in peace-time manoeuvres aircraft have, for obvious reasons, generally been limited to simulated air attacks against fixed targets, often of considerable dimensions, where the attacker knows the conditions on the spot and can make his attack without being disturbed by the heavy fire which would have met him in real warfare. This has often led to erroneous conclusions being drawn in the final assessment of the exercise.

In a defensive sea-air strategy, protected shelters for naval and air forces in their bases, combined with a good radar observation and land-to-air missiles at the bases, are naturally important. For more efficient defence, naval forces ought to dispose of an efficient helicopter service, reliable target-seeking torpedoes, and depth charges with nuclear loading.

Finally, defence against invasion by sea, calling for the closest co-operation of naval and air forces in order to attack an invasion fleet, concentrated or dispersed, is the climax of defensive sea-air strategy. If this attack cannot wholly break up an invasion it may yet considerably disrupt the attack and give time for the defence to adopt a better equilibrium.

Such is the basis of a modern defensive sea-air strategy, particularly as it affects the medium and smaller naval Powers.

(To be continued.)

TOO FEW INFANTRY ?

By LIEUT.-COLONEL J. D. LUNT, O.B.E.,
16th/5th The Queen's Royal Lancers

MOST of the generals who commanded during the last war seem to be agreed that there was never enough infantry to go round. The shortage was so acute at one stage that it proved necessary in Italy to dismount some of the armoured regiments, including the writer's, and employ them as infantrymen in the Apennines. Nor was this shortage peculiar only to the last war; during the first World War cavalry regiments were sent to serve in the trenches where they acquitted themselves as well as their successors were to do in the mountains 27 years later. It now appears that what was true in the past is proving to be true again. Gunners are being employed on purely infantry tasks in both Cyprus and Ulster, while rumours are rife that regiments of the Royal Armoured Corps may have to take to their feet if infantry commitments increase. It is the object of this article to examine this problem, and to try to determine whether the policy to cut down even further our meagre infantry force is a wise one.



There is no intention, however, of criticizing the Government's decision to reduce the size of the Army by abolishing National Service and substituting a long-service Regular Army in its place. The time was overdue for a reappraisal of our defence policy in the light of the invention of the thermo-nuclear weapon, and the Defence White Paper of 1957 was an honest and courageous attempt to face the fact that our strategy required a completely 'new look.' It is not with the conclusions of that White Paper that some of us would seek to quarrel, but rather with some of the decisions which have stemmed from it. Too often in the history of the British Army has the pendulum swung from one extreme to the other, leaving it with insufficient means to meet its obligations when the need has arisen. Has the pendulum swung too far where the infantry are concerned?

When the writer left Sandhurst in 1937 there were 138 battalions of infantry in the Regular Army, of which 10 were Foot Guards, while the Indian Army could muster nearly 90 battalions, of which 20 were Gurkhas. In all a total of 228 battalions—yet when moments of crisis arrived, as happened during the Italo-Abyssinian war and in Palestine, the infantry was hard pressed to meet all the calls made upon it.

In spite of the lessons learned during the inter-war period, it is now intended to reduce the infantry until it is less than half as strong, and there is no longer the magnificent Indian Army to share the load. By the time phase II of the infantry amalgamations has been completed in 1962, there will be only eight battalions of Foot Guards and 50 battalions of the Line, supplemented by three parachute battalions, eight of Gurkhas, and six of King's African Rifles. This may be the maximum number we feel we can recruit, or it may be as much of the available manpower as can be allocated to the infantry, but even so it seems dangerously thin on the ground.

It can of course be argued that our overseas commitments have been reduced, but is this in fact the case? It is true that there is no longer the requirement to

garrison India, which absorbed upwards of 50 battalions before the war, but on the other hand Cyprus in those days managed quite happily with one company, detached from the battalion in the Sudan. It has been shown only too often since 1945 that no sooner does one commitment cease than another appears to take its place. Palestine, Malaya, Korea, Kenya, Egypt, and now Cyprus, have all followed close on each other's heels, and in every instance the cry has gone up to heaven—"more infantry!" Part of the trouble lies in the fact that for the public at large the infantry is an unspectacular arm, just as destroyers and frigates are the least spectacular components of the fleet. Yet it was precisely a shortage of small ships which brought us so close to our knees in 1941, and it may well transpire that too few infantry will handicap us in waging the cold war and preventing it from becoming a hot one.

All planning for the shape and size of the Army must take into consideration the three types of war we may be called upon to fight—global, limited, and cold. Balanced forces, with proper logistical support, are essential for the first two, but artillery and the 'tail' have little part to play in the cold war, while as for armour only the armoured car regiments are of any real value in internal security operations. Infantry on the other hand is required for all three, and it has a vital part to play in the successful conduct of the cold war. Will there be enough of it to go round? With the experience of Suez fresh in our mind—and who is to say there may not be a similar requirement in the future?—the answer may turn out to be in the negative.

Field-Marshal Montgomery has often drawn attention to the failure of the West to plan a co-ordinated strategy to fight the cold war, and he has even gone so far as to prophesy that if we continue to play the game 'off the cuff' the Communist Powers will eventually achieve a bloodless victory. The history of the past 10 years unfortunately confirms the Field-Marshal's diagnosis; on almost every occasion the West has been caught on the wrong foot and, taken by surprise, has only been able to retrieve the situation by the expenditure of much blood and treasure, and often at the expense of the sympathy of the uncommitted Powers. The deteriorating situation in Cyprus is only one example of this; a nettle which was not grasped firmly enough when first it reared its head has now stung all who try to touch it, has driven a wedge into N.A.T.O., has lost us the goodwill of both Greece and Turkey, and has set the two communities in Cyprus at each other's throats.

If the West is handicapped by an inability to agree an overall strategy for the successful waging of the cold war, the same is not true of the Communists. Immediately after the war the bulk of their effort was directed against Europe, only to recoil, *pour mieux sauter*, when the imminent threat of global war forced the West to combine in N.A.T.O. The Communists then switched to the Far East where the French were forced to withdraw from Indo-China, and Britain was compelled to fight an arduous and expensive campaign in Malaya. The Middle East, vibrant with nationalism and seething with personal ambitions, was the next most obvious target, and who can deny the fact that the power vacuum left by the disappearance of British influence in that region has been solely to the Communists' advantage? Cyprus may only be an offshoot of the main struggle in the Middle East, but it has already served Russia's purpose well by estranging Greece and Turkey, and every day that a settlement is postponed is a gain to Russia in its aim to wreck N.A.T.O.

Although we have grown to regard the cold war in its various guises as a new manifestation in power politics, it is in fact, from the military angle, only a repetition of the British Army's traditional role between major wars. Internal security

operations in Cyprus in 1957 do not differ materially from those conducted in Palestine in 1937, the main difference being that nationalism and anti-colonialism, both of which have long existed, are now being utilized by the Communists to help them to achieve their ultimate aim of world dominion. To that extent, therefore, there is more at stake. The disruption of our capitalist economy is a vital factor in the Communist plan, and since Defence expenditure bears more heavily on the economy than any other form of expenditure, it is essential that we do not spend more than we can really afford. Nevertheless, this must be related to the need for us to meet our international commitments and to fulfil our obligations, not only to our allies but also to those whom we govern. In the case of the latter we cannot escape our responsibility to maintain law and order. By reducing our forces below the desirable minimum, and by bringing home the legions, we may be restricting our ability to meet these obligations.

Where is the next blow going to fall? The evidence would seem to suggest in Africa, where the French are already heavily committed in Algeria and where all the ingredients for Communist subversion are present, only waiting to be mixed and stirred into outright rebellion. South Africa's *apartheid* policy, whatever its rights and wrongs, cannot fail to rouse resentment among the Africans; the Central African Federation meets with no enthusiasm in Nyasaland; Kenya has its multi-racial problem coupled with Mau-Mau which lies down but refuses to die; there may be trouble brewing in the Horn of Africa; and Nasser's shadow never grows any less. There is a real witch's broth brewing in Africa, the last great Colonial continent. If we are to be faced with widespread rebellion over that vast area, shall we have enough infantry to meet and defeat it before Africa develops into another but immeasurably greater Cyprus?

There are two schools of military thought on this subject of fighting the cold war. The more influential school holds the view that our overseas garrisons should be reduced to the minimum, and that instead we should maintain a central strategic reserve ready to be rushed like a fire brigade from fire to fire. The other school of thought, which inclines to the view that a bird in the hand is worth two in the bush, would prefer to see troops on the ground in possible danger spots before trouble arises, although this may be a more uneconomical use of our available manpower. Theoretically the former school may be correct, but in practice the strategic reserve has seldom been able to operate in the manner for which it is designed. It has either been hamstrung through lack of suitable aircraft in sufficient quantity to transport it rapidly to the scene of the fire, or the calls made on it have been so many and varied that it has no sooner been collected together than it has been scattered to the four winds again. The wanderings of some infantry regiments since 1945 would require a Homer to do justice to them!

Those of us who believe that the presence of only a few British soldiers on the ground exert an influence far beyond their actual numbers or fighting potential would not quarrel with the protagonists of the strategic reserve if only we felt that the best way to deal with a fire is to wait until it has burst into flames. But this is not our view; we believe that the best way of fighting a fire is to throw the burning cinder back into the fireplace before it has set fire to the whole house, and this can only be done by the householder on the spot. One infantry company on the spot in Berbera, for example, can be of more effect in the initial stages of a rebellion than an entire parachute brigade flown out a week later. Its presence may even prevent the rebellion breaking out.

Unfortunately it is much more expensive to scatter troops in penny packets round the world than to hold them centrally in a strategic reserve. Moreover, it complicates the training problem and adds to the Movements bill. It also calls for more infantry battalions than it seems we are prepared to afford, or perhaps feel that we can recruit. Dealing with the latter argument first, it is the writer's view that it is wrong to assume that we cannot recruit the numbers we need. Overseas service is a major recruiting attraction and far outweighs pay increases and other inducements to enlist. What is more, the soldier usually prefers the small garrison to the big one. If, then, we can recruit more infantry if we desire to do so, how can they be fitted in to the Army's ceiling strength of 163,000 ?

There can be only two methods for doing this ; either by increasing the strength of the Regular Army, or by cutting down on the other arms to find the additional manpower cover for the infantry. It must be assumed that B.A.O.R., which is essentially a force designed to fight global war, will remain a commitment for many years to come. However much its organization may be chopped and changed to shape it for the type of war it may have to fight, it must remain an integrated force of armour, artillery, and infantry, with a logistical backing which will, if necessary, render it independent of the United Kingdom base for a prolonged period. Unless it is drastically reduced, and this would involve a political decision of far-reaching implications, it will continue to absorb nearly all the armour we can afford to maintain and most of the artillery. It will also require considerable logistical backing. There are few economies to be made here.

In the United Kingdom we must maintain a balanced force of at least a division, which can be employed in any limited war which may take place, and over and above this there must be a central reserve for the immediate reinforcement of our overseas garrisons. If some 15 battalions are required for this purpose, and B.A.O.R. requires 20, half our projected infantry force has been absorbed. Yet in Algeria alone France is employing double our existing infantry battalions in an attempt to contain F.L.N., while in Cyprus 14 battalions or their equivalent have yet to bring EOKA to book. The conclusion seems inescapable—too few infantry.

Can the additional manpower cover be found from within the Army ? The Royal Armoured Corps is already stretched to meet its obligations and there is a constant demand from B.A.O.R. for more armour. It is unlikely that manpower economies can be made in the R.A.C. and the same goes for the Gunners and the Sappers. The 'tail' is now being drastically reduced, but one wonders whether the process is going to go far enough, and the same goes for the headquarters staffs. The garrisons of the Free Territory of Trieste always seemed to the writer to be a damning indictment of the British Army's failure to make the maximum use of its manpower, although admittedly this was due to financial and not military reasons. The British and American garrisons in Trieste were limited by Treaty to 5,000 men apiece. Out of this strength the British managed to squeeze one infantry brigade with no supporting weapons, say 2,000 men. The remaining 3,000 were there to administer them. The Americans on the other hand managed to maintain three infantry battalions, a company of tanks, a battery of guns, and a reconnaissance force. Their administration and welfare was at least as lavishly organized as our own, but much more use was made of civilians. If global war breaks out we are all likely to be in it from the first instance, so is it not time that we accept the fact that most of our 'tail' is going to have to be civilianized, and begin to operate on that basis now ?

If the ancillary services can be reduced and the headquarters staffs cut still further, there will be a considerable manpower gain. This can be augmented by the abolition of much wasteful extra-regimental employment and the substitution of soldier labour in such places as Schools and Staff Colleges by civilians ; the author can think of at least one institution where the implementation of such a policy would immediately result in the gain of one infantry company ! The overall savings might well provide for an additional infantry brigade.

Glubb Pasha's maxim for maintaining internal security was always to be one jump ahead of the evil-doers and to move in with the maximum amount of force before trouble began. Although in the long run he was defeated by a combination of forces which he could not have foreseen, the success of his policy is shown by the fact that it was not until 1955 that the Arab Legion ever had to open fire during internal security operations ; it was not even required to do so when the country was shaken to its foundations by King Abdullah's assassination in 1951. Such a policy does however require that troops should be readily available and prepared to intervene before matters reach a crisis. No strategic reserve, however mobile, can fulfil this requirement. Only pre-positioned infantry battalions can do so. It also takes into consideration the fact that the Asiatic or African only believes and respects what he can see with his own eyes ; a battalion out in the cantonments means far more to him than a whole division 3,000 miles away.

Any writer in a military journal is necessarily at a disadvantage since he is either not in a position to know all the facts which determine policy, or if he does know them he is not at liberty to disclose them. There are doubtless many and good reasons why it should be considered that we can meet our overseas commitments with less than half the force of infantry that sufficed 20 years ago, but to the writer, who has spent most of his service overseas and much of it in service with indigenous forces, the reason is not readily apparent. We may well be requiring more infantry before we are much older, and probably in Africa. From where is it going to come ?

· FOCH : THE FIRST SUPREME COMMANDER

By MAJOR T. A. GIBSON, THE WILTSHIRE REGIMENT (DUKE OF EDINBURGH'S)

IN 1862 that redoubtable soldier, Stonewall Jackson, calmly reassured a subordinate aghast at having to attack what seemed to him an impregnable position ; " General, I always endeavour to take care of my wounded and to bury my dead. You have heard my order—obey it ! " In 1914 another fiery corps commander, Ferdinand Foch, enacted almost the same scene. One of his subordinate commanders reported to Foch that his troops were so situated that they would have to retire if they were attacked. Foch listened silently and intently, even letting his frugal cigar go out. Then he set his cap at the right angle, deliberately re-lighted the remains of his cigar, and gave his decision. " You must not retire. Your troops must hold on at all costs."

" That means we must all die ? "

Foch stared hard at the stump of his cigar, stood up, and threw it away. " Exactly. You have hit it," he said and walked away, leaving his subordinate staring after him.¹

When Stonewall Jackson fell mortally wounded at Chancellorsville in April, 1863, a young Foch was not quite 12 years old. Yet in spite of the difference of time, nationality, and certain basic qualities of character, the two great soldiers have a strong similarity. In the personal vein both were austere and deeply religious ; in the military sense both were Gunners with a flair for teaching. When the test came, both proved formidable fighting soldiers able to execute their peacetime theories without hesitation and with the utmost energy. Both were remarkable exponents of offensive action and mobility. But there the comparison ends. Jackson was 38 when fame beckoned ; Foch, in the tradition of elderly French generals, 62. Moreover, Foch was to gain renown as a strategist and higher commander directing army groups while Jackson died a corps commander, ever the right hand and hammer of the great Robert E. Lee.

Ferdinand Foch was born on 2nd October, 1851, at Tarbes, in the shadow of the Pyrenees, of lower middle-class parents. When Gambetta's cry for levies went out during the Franco-Prussian War, Foch joined the 24th Infantry as a private soldier from the great Jesuit college of St. Clement at Metz. But the young Gascon saw no active service. Instead he languished in training camps noted only for their inefficiency and discomfort. After the armistice he returned to Metz to complete his studies, and the great fortress city, the goal of Bazaine's lethargic retreat and the scene of his surrender, was not without its influence on an impressionable young mind. While still at Metz, Foch decided to become a soldier. He qualified for and joined the *Ecole Polytechnique* just after the bloodshed of the Commune. France's humiliation was apparent wherever he went.

As an *aspirant*, and later as a young officer on regimental duty and on long courses, Foch did well. In a modest way his career began to shape itself from the common run ; his character, though not intolerant, was forthright to the point of bluntness and he became noted both for his concentration on the task in hand and for his determination. Though rather serious for one in the twenties, his outlook might be better described as dedicated rather than priggish.

¹ *The Biography of the late Marshal Foch*, by Major-General Sir George Aston.

In 1885 he was selected for the newly-established *Ecole Supérieure de Guerre* and ten years later, after being promoted commandant as a battery commander, his call 'out of the ruck' came: he was appointed to the directing staff. Moreover, within a year he was promoted lieutenant-colonel and chief instructor with his especial field military history, strategy, and tactics.

The impression of Foch on the Staff College—and therefore on the young elite of the French Army for some five years—was profound. His vast technical knowledge, the result of years of hard study and reflection on his profession, together with his enthusiasm and effervescent personality, produced most stimulating lectures. His theory of war was based on a passionate assertion of the superiority of the attack, and because the French nearly blundered to another crowning defeat in 1914 with the nebulous 'Plan 17,' Foch and his disciples have been roundly criticized. But the hard fact remains that wars are won only by attacking.

Foch's gospel of war had far more to it than a parrot-like repetition of '*Attaquez ! Attaquez !*' His thought without doubt had a considerable psychological basis, directed against the memories of 1870 with their chaotic retreats and humiliating surrenders and the general air of bewilderment and paralysis that afflicted most of the French commanders. His underlying message was to impress the supreme importance of good morale and the commander's will to conquer.

Foch was now a marked man but, unfortunately, in more ways than one. In the late nineties, the Dreyfus case hung heavily over the French nation and Army, and in 1899, when the wretched Dreyfus was finally pardoned, the anti-clerical party, burning with reforming zeal, swept into power. As Foch was almost notorious in the practice of his faith and as his brother, Germain, was a Jesuit, his dossier soon bore the black mark of a known clerical. In 1900 he was summarily removed from the Staff College and posted to the 29th Artillery Regiment at Laon. A corollary to this banishment was that his promotion to colonel was delayed for three years, and the cynics prophesied the ultimate end to his career.

His period in the wilderness, however, was not wasted. In 1903 and 1904 he published the substance of his lectures in two volumes, *Des Principes de la Guerre* and *De la Conduite de la Guerre*, which had a wide military circulation and were recommended for study for entry to the Staff College. Slowly he moved up the professional ladder; in 1903 he was promoted colonel and went to command the 35th Artillery Regiment at Vannes, and in 1905 he was appointed Chief of Staff to V Corps at Orleans. During these years of exile from favour he read, studied, and pondered, continually preparing himself. Finally, in a fateful year for him, for Clemenceau had become Prime Minister, Foch was promoted brigadier-general at the age of 56 and called to the General Staff in Paris.

Clemenceau, though he nourished himself on the implacabilities of his hatreds, had the saving virtue of being a realist. The key appointment of Commandant of the Staff College was becoming vacant and the military reputation of Foch, the uncompromising Catholic, had not escaped him. In July, 1908, a terse historic first meeting occurred between the two leaders who were later to be so vital to France, but it was not until September and another interview after the annual manoeuvres that Foch secured the post.

Foch's star was now burning brightly. His impact on the Staff College was twofold; both as the inspiring teacher and the reformer. He not only drastically remodelled the two years' course but also made a revolutionary change by establishing

a nine-months' course for selected lieutenant-colonels. One of the first students at this course, nicknamed the school for budding marshals, was a certain Lieutenant-Colonel Weygand of the Hussars.

In 1911 Foch left the Staff College to command the 13th Division at Chaumont. Soon afterwards, in December, 1912, he was appointed commander of VIII Corps at Bourges; and in August, 1913, of that very important formation, XX Corps, which guarded the traditional route of invasion between France and Germany at Nancy and covered the mobilization. A young cavalry officer, Captain Dubarle, has written graphically of the Foch of this period, a matter of months before the outbreak of war. "What strikes one first is his bright, penetrating glance, full of intelligence but, in spite of that great energy, still luminous. This 'luminosity'—there is no other word for it—quite spiritualises a face that otherwise would almost be brutal with its great moustache and protruding jaw. When he speaks, drawing lessons from the manoeuvres, he gets extraordinarily animated, almost passionate, and yet never fails to express himself with simplicity and purity."²

The outbreak of war found Foch's corps part of Castelnau's 2nd Army which, under the directions of Plan 17, was to advance with the 1st and 3rd Armies into southern Germany. But in a matter of days this general French plan was in dire trouble. In the south progress was slow and bloody, while in the north it was becoming evident that something terrible was bearing remorselessly on a wide right wheel out of Belgium and the line of the Ardennes. Fortunately for the French, Joffre, rocklike and placid, acted calmly and surely. Divisions from the south were hurriedly entrained for the reeling French left as three powerful German armies, marching at an incredible speed, pivoted on Dinant and bore out of the north-east on Paris.

Meanwhile, in the south, Crown Prince Rupprecht counter-attacked with his Bavarians and had the French in considerable difficulty. Foch saved a critical situation by counter-attacking with his corps to cover Nancy after the two disastrous battles of Sarrebours and Morhange. But on the 29th August Joffre, who had sore need of strong, resolute commanders at his hand in the desperate situation which was reaching its climax, summoned him to take over a hurriedly-assembled *Detachment de l'Armée*, afterwards called the 9th Army. He was given a mere handful of officers as his staff, one of the five being Weygand as his Chief of Staff, and the task of his army was to cover the marshes of St. Gond and the dangerous gap between D'Esperey's 5th Army and the 4th on his right.

Here was a situation worthy of Foch, no longer a subordinate commander in the strict sense—a makeshift army, a minute and *ad hoc* staff, a time portentous with disaster on a national scale, his troops wearied and affected by almost continuous retreat. He had to contend with part of von Bulow's 2nd Army, intent on crushing the right of the 5th Army, and most of von Hausen's 3rd Army. On 6th September, when Manoury's 6th Army had struck into the flank of the German right and the British Expeditionary Force and the French 5th Army were advancing into the yawning gap between von Kluck's 1st Army and the German 2nd Army, Foch was still in difficulties and getting more so. With his burning energy and determination he drove his tired commanders and troops into counter-attack after counter-attack. Each failed, but the Germans were held. On the 10th the tide turned with the recapture of the key town of Fère Champenoise, for the wholesale German débâcle, which Foch, as the higher commander thinking beyond the terrors of his own local

² Ibid.

situation, had foreseen, had set in. "The Germans are at the extreme limits of their efforts; they are exhausted and surprised at our resistance. Disorder reigns among them. Success belongs to the side which outlasts the other. And I gave the order to attack, whatever happened."³

In the follow-up of the retreating Germans from the Marne to the Aisne, Foch was not unlike the Rommel of a later war, travelling almost with the leading regiment. Furiously he spurred his divisions on and was ruthless with stupidity or lack of initiative. "He, Foch, complained that most of the generals were so upset by the victory that they feared to do anything more. 'Poor old regulations! They are all very well for drill, but in the hour of danger they are of no more use. . . . You have to learn to think'."⁴

From the Marne and the 9th Army Foch was sent by Joffre to be his deputy, co-ordinating the armies north of the Oise, for after a brief respite spent in overcoming the numbing shock of blundering the Schlieffen Plan, the Germans attacked in the hope of a breakthrough to the Pas de Calais. Here again was a black situation, but one which also brought out his gift of handling Allies. The Allied armies comprised the 2nd Army commanded by his former chief, Castelnau, the 10th Army of Maud'huy, the British Expeditionary Force, and the Belgian Army under the King of the Belgians, and in the ensuing months of the First Battle of Ypres Foch drove untiringly about their strained and wearied ranks. In October he had a most terse interview with the King of the Belgians, insisting that the exhausted Belgian Army must hold the line of the Yser; an interview that later the King was generous enough to acknowledge appreciatively. With his charm and enthusiasm he won over that very disillusioned ally, Sir John French; by the force of his personality he bolstered Castelnau, a sobered commander after his experiences in Lorraine, and inspired the chivalrous Maud'huy; "entering like a gust of wind, Foch extended his arms and cried: 'Maud'huy, I embrace you for all you've done, and for all you will do—you hear what I say, for all you will do!'"⁵

The guns of the First Battle of Ypres died away in November, and both adversaries stood back exhausted to prepare for 1915. Foch was superbly confident, but 1915 was to be a year of disappointment for him. After the German attack in the Second Battle of Ypres in April, the main French spring offensive, launched by Joffre and Foch from Artois and Champagne to achieve a decisive breakthrough, went well initially but petered out through lack of reserves at army level for exploitation. In September, an autumn offensive in the same area and the Battle of Loos fought by the British had the same disappointing results.

The stalemate of 1915 plunged Foch into being a convinced and somewhat gloomy artilleryist; he was reluctant to mount any attack in these static conditions of siege warfare in which the artillery support was not extremely formidable or if the ammunition supply was prejudiced. The birth of 1916 saw Joffre's proposal to Sir Douglas Haig, who had succeeded Sir John French at the end of 1915, for a great Allied offensive astride the Somme from Lassigny to Arras. The German assault on Verdun, however, intervened in February and Foch, who had been detailed to plan the Somme operations, saw his divisions melt away to be consumed in the Verdun furnace. The main burden of the offensive fell to the British. On 17th November

³ Ibid.

⁴ Ibid.

⁵ *Foch, The Man of Orleans*, by B. H. Liddell Hart.

the offensive ended after some four months with appalling casualties, especially in the British 'new armies,' and very little gains.

A shadow was now creeping over the reputation of Foch. The French public, heavily strained by the bloodbath of Verdun and the Somme casualties, began to cool in their popular regard. Whispers circulated surreptitiously in political and certain Army circles in Paris regarding his health, which was reported to be failing because of a car accident he had in April through his typical habit of driving too fast. Also his age, 65, and the great strain of the war were alleged to be proving too much for him. In later years he characteristically shrugged off these stories: "When you want to kill your dog," said Foch, with great good humour, "you begin by saying it is mad. That is a very old rule to which there are very few exceptions."⁶

In December the heads began to roll. On 12th December Joffre was appointed to the rather abstract post of technical adviser to the Government on the general conduct of the war, and Nivelle, the hero of the Verdun counter-stroke, relieved him as Commander-in-Chief of the French field armies. But earlier in December Joffre had abandoned his trusted subordinate and mentor, Foch, in a moment of yielding to the gossip, and Foch was removed from his command and set to study problems of potential strategy.

While he chafed away at his somewhat academic studies, the fortunes of the French Army crashed to a nadir in the short but ill-starred Nivelle offensive in Champagne from 16th-28th April, 1917. To arrest the frightening disintegration of morale Painlevé, the new War Minister, took rapid and drastic action. Nivelle was dismissed and Pétain, calm and reassuring, appointed Commander-in-Chief to nurse the stricken Army back to health. On 10th May Painlevé sent for Foch, whom he admired, and offered him the appointment of Chief of the General Staff. Foch was not over eager to take the offer in spite of his period in the wilderness; he would have much preferred the field command of the central group of armies which had just been given to Fayolle on Pétain's promotion. However, Pétain strongly supported Painlevé and on 15th May Foch became Chief of the General Staff.

Once again, as Foch stepped into the arena, the Allied horizon was most dark. Mutiny gripped the French Army, Great Britain was in the agonizing throes of the full submarine campaign, and Russia was seething with discontent and imminent revolution after her many defeats, and was almost out of the war. The one bright aspect was the entry of the United States into the war on 6th April.

In the face of these crises Foch and Pétain were determined to stand on the defensive until 1918, by which time the French Army would have recovered and the potential strength of the Americans developed. A strong dissident voice in the Allied councils was Sir Douglas Haig, backed by the C.I.G.S., Sir William Robertson. Undaunted by the experiences on the Somme, these two strong-willed, equally inarticulate Scots determined on fresh batterings against the Hindenburg Line, to which Ludendorff had withdrawn the German armies so coolly and disconcertingly just before the Nivelle offensive. Undeterred by another barren and costly offensive at Arras in April and May, Haig now went wholeheartedly for a long-nurtured project, an offensive in Flanders. Foch and Pétain were aghast at such a plan. Foch scathingly referred to it as "the duck's march through the inundations to Ostend and Zeebrugge."⁷ On 31st July the British attack went in and after three dreadful months the offensive foundered in the swamps of Passchendaele. One triumph relieved a

⁶ *Marshal Foch, His own words on many subjects*, by Raymond Recouly.

⁷ *Foch, The Man of Orleans*, by B. H. Liddell Hart.

gloomy year—the vindication of the tank at the Battle of Cambrai on 20th November. The Italian disaster at Caporetto on 24th October brought Foch out in his now familiar ‘fire brigade’ role, though the Italians proved more sensitive to the impact of his fiercest Ypres 1914 style than had his other Allies.

Caporetto at least ensured the first physical step to a long-cherished ideal of Foch's, an instrument of Allied unified war policy. On the 7th November, the Supreme War Council, consisting of each Allied Prime Minister, a second minister, and their military representatives, was born at Versailles, and its establishment was noteworthy by the accession of Clemenceau to power in France and Lloyd George's strong leaning to Foch in his antipathy to Haig and Robertson. The latter statesman was to sum up his impressions of his two senior military advisers rather bitterly; “their abilities narrow, their obstinacy abnormal.”⁸

The year 1918 soon became fraught with decision. The Bolshevik seizure of power in Russia set loaded troop trains rolling from the east to swell the German armies in the west. Where the Allies in 1917 had a preponderance of three divisions to two, the Germans now mustered, in January, 1918, 177 divisions, with 30 to follow, against 164 divisions plus four American divisions (which were double the strength of a European division). Foch began pressing for the realization of another ambition, the formation of an Allied general reserve of about 30 divisions to be controlled by the Executive Board of Military Representatives at Versailles. It seems strange that Foch, who had little use for committees, asked for such an arrangement; perhaps, in the absence of any enthusiasm by the several vested interests for a unified command, it was his last and desperate resort to prepare for the tremendous German blows he knew were coming. It was Haig's adamant opposition that effectively killed any further thought on the general reserve; Pétain also was loath to yield his quota of 13 divisions and grudgingly offered eight, for his staff had dark thoughts on Foch's ambitions to become Generalissimo. But, ominously, “these conversations were not four weeks distant from the day—a day of muddle and disaster—when the despised Foch was called by the united voices of the men—Clemenceau, Haig, and Pétain—who had overthrown him and his plans as things of no worth, to save the Allies. . . .”⁹

On 21st March Ludendorff launched his first great bid for victory; 35 German divisions smashed into and rolled over Sir Hubert Gough's 5th Army of 21 divisions and drove hard for Amiens. By 28th March the front was overwhelmed on a breadth of 50 miles and to a depth of 40 miles. At first Haig was confident of handling the German assault and Pétain was most prompt and obliging in giving Haig a corps from his reserve, but as both realized the magnitude of the catastrophe a most dangerous divergence set in. At the fateful Doullens Conference of 26th March, it was apparent that Haig was bent on fighting back to cover the Channel ports and Pétain on ordering his retreat to cover Paris; only the supreme courage of Foch saved the situation. At the conference even the legendary Clemenceau felt the tide of the German flood, and it was a wavering Clemenceau who at last yielded to Foch co-ordinating the action of the French and British armies on the Western Front. By 1st April the German onslaught had been brought to a standstill. But the co-ordinating role had not been all that satisfactory, for though Haig and Pétain “were quite happy to share the responsibility with Foch, they were not ready to part with any of their authority.”¹⁰ At the Beauvais Conference on 3rd April, Foch was appointed *Général-en-Chef*.

⁸ *The War Memoirs of David Lloyd George.*

⁹ *Ibid.*

¹⁰ *Ibid.*

One by one, more German offensives came smashing into the Allied line. On 9th April the Germans attacked on the Lys, drove a Portuguese division of poor morale from the field, and once again crumpled the British front in a determined drive on Hazebrouck until halted by British and Australian reserves brought from the Somme after a penetration of 12 miles. Ludendorff's next gamble was directed against the not very alert French 6th Army holding the bloodied Chemin-des-Dames ridge north of the Aisne, and by 1st June the Germans had reached the historic Marne at Chateau Thierry. Here the French reserve divisions and the fresh energetic American divisions succeeded in roping off the salient, but not before the nervy political circles of Paris began crying for Foch and Pétain to be dismissed. Clemenceau courageously stood by his two senior commanders.

After a counter-attack by the fiery Mangin which adequately dampened any further German zeal, Foch spent the rest of June and early July in regrouping the muddled Allied divisions to prepare for the reception of further assaults. His intelligence had gleaned an inkling of a great attack coming on either side of Rheims, and on 15th July this last German offensive in the west struck. An Allied offensive that Foch had been planning now developed into a counter-stroke against this attack; on 18th July he launched Mangin's forces out of the forest of Villers-Cotterets, without the customary preliminary bombardment and with 350 new fast Renault tanks, into the right flank of the German attack. The attackers were driven back 45 kilometres and some ten divisions were destroyed.

The tide had now begun to turn forcibly. Between March and June the Germans had lost some 700,000 men in their offensives; her reeling ally, Austria, had spent her last spark of aggression and 100,000 men in an abortive offensive on the Piave, and some 27 double-sized American divisions had arrived in France. Foch saw the writing on the wall. In spite of the pessimism of British G.H.Q. he realized the time had come to strike, and to strike hard.

He won Haig over to his sanguine views by the momentous events of 8th August when, from a plan 'sold' to Rawlinson by the extremely able Australian corps commander, John Monash, those three formidable corps, the Canadian, Australian, and III Corps, with 450 tanks, shattered the Hindenburg Line south of the Somme, precipitating a wholesale panic in the German 2nd Army which quickly spread to the 18th Army.

The great Allied offensive was now hammering at all parts of the front. From 8th August to 18th September a series of concerted blows cut widely and deeply into the sagging German armies. On 26th September the final phase began with Foch directing a general offensive in a gigantic pincer movement with his rallying cry, "*tout le monde à la bataille!*" When the British broke the Hindenburg Line on 30th September on a 25-mile front, victory was assured in 1918. Though much hard fighting was to follow in the wake of the German retreat, the Allied Line rolled forward until, on 6th November, the British were back at Mons and Maubeuge, so poignant with memories of the dramatic days of 1914; the French were at Vervins and Rethel; and the Americans at Sedan. On 8th November the German plenipotentiaries arrived to sue for an armistice, for it was evident that, on their threshold in Lorraine, Foch was about to launch an invasion into Germany with two French and one American armies.

Foch's one goal at the armistice negotiations was to secure control of the Rhine. He did not necessarily advocate an occupation of the Rhineland, but preferably a neutral Rhineland separated from the machinations of Prussia. However, not the

least opposing factor to his plans for France was the ever-increasing enmity between him and Clemenceau. These two strong personalities never did like each other; the cement of their uneasy alliance was their mutual acknowledgement of each other's worth to France at a most crucial period. But Clemenceau's partisan mind became more and more suspicious of Foch in late 1918, especially when he pronounced on such politico-military topics as the future of the Rhineland. The anti-clerical bloodhound in Clemenceau professed to see another Boulanger, but possibly an even more human motive was jealousy at Foch's immense popularity in the hour of victory, even though he too was raised to the same plane of public adulation. His attitude to Foch was one of antipathy interspersed with flashes of benevolence. At the time of the full flood of the German offensive of 15th July, Clemenceau travelled from Paris to see Foch, only to find that he was at Mass. Clemenceau reacted by saying; "Don't disturb him. It has acted on him too well for that. I'll wait."¹¹ On a different occasion he could say acidly that Foch 'was blinded by the smoke of incense.'¹²

Lloyd George is very illuminating on their relationship. "But the most fatal of all Foch's critics—I might say adversaries—was Clemenceau. Foch was a devout Catholic. . . . Clemenceau was the most inexorable of all the anti-clericals. . . . The spiritual antipathy between these two remarkable men developed in the course of the ensuing months into a personal antagonism which was unpleasant to all who took part in conferences with them. There is nothing more disagreeable in council than to witness the clashing hatreds of two strong personalities." Clemenceau's refusal to abandon Foch and Pétain to the ravening political lions of Paris during the German bid to capture Chateau Thierry was perhaps prompted by the very sensible appreciation that there was no one else to take their place.

With the great and most bloody struggle over, Foch was the hero and toast of the Allied nations. The doubters and carpers were stilled and gone, like the hot smoking guns which had stood almost wheel to wheel along the long and tortured front. On 7th August, 1918, on the proposal of Clemenceau, he had been made a Marshal of France, and in this most distinguished rank he went on to lead his armies of several nationalities to ultimate victory. Was in fact Foch a great captain, fit to rank in the company of the great modern commanders like Robert E. Lee and von Moltke, or was he the tactful and intelligent chairman of committee, as was the fashion of the second World War?

If there was anything that Foch abhorred it was the dreary round of committees and conferences. He had only two conferences with his Commanders-in-Chief during his period of high command. Foch was essentially a man of action whose mode of command was the personal visit and contact in the field; his boundless energy called for physical activity and his autocratic commanding personality shrank from the interminable discussion and compromise of the conference table. Though by nature and long training a military autocrat, he really was, in spite of occasional storms, a most successful Allied Supreme Commander. "Though masterful by nature, he knew when to yield. Impatient of all opposition, he maintained a strict control over himself, acquired by long and determined training."¹³

Foch's greatest military quality was undoubtedly his unquenchable moral courage. Like all really great soldiers he was at his best when the situation was taut

¹¹ *Foch, The Man of Orleans*, by B. H. Liddell Hart.

¹² *Ibid.*

¹³ *Ibid.*

with impending disaster. In the unimaginative war which developed from 1915 until 1918, when bloody assault after assault went in frontally against deep fields of barbed wire and machine-guns which raked almost every yard of ground, when artillery was the god to be worshipped or feared, he was probably neither better nor worse than his fellow higher commanders. He was at his best in fluid conditions, searching for the chance to deliver his riposte at the breakthrough or energetically exploiting the successful attack.

As a commander he could be ruthless with any tardiness or stupidity. During the retreat of the Germans to the Aisne in 1914 he went at several of his divisional commanders like an avenging wind, particularly his cavalry commander who allowed himself to be held up at a bridge which the enemy held in strength because "he could sabre them all" and had not thought to use his accompanying artillery. During the 18th July, 1918, counter-stroke he had Pétain's Chief of Staff removed for not being aggressive-minded enough, which rather understandably annoyed Pétain. But, by the same impetuous token, he had a deep and abiding loyalty to his fellow commanders and subordinates. He stuck staunchly by Sir John French to the end when Kitchener was determined to unseat him. Even more sturdy was his defence of Haig when Lloyd George would have welcomed even his passive disinterest.

Foch's loyalty to Haig is somewhat touching when Haig blew alternately warm but mainly cool towards him. Lloyd George wrote: "I was informed subsequently that our G.H.Q. had a poor opinion of Foch and his capacity for such an exalted and responsible position. They could not conceal their contempt for the old soldier. A man who could explain himself clearly must necessarily be shallow and garrulous. To speak lucidly and fluently was bad enough, but he also spoke dramatically. Foch was a Gascon by birth, and Latin exuberance seems as much a sign of folly to the Anglo-Saxon as insular reserve seems a sign of stupidity to the Latin. He was just a stage Frenchman to be mimicked and laughed over. He was referred to in high military quarters as that 'old dotard Foch.' How brilliant soever had been his past career, they were convinced that his best work was done and, judging by the comments made in staff circles, he was treated as a 'has-been' with nothing left but a blustering manner which they thought deluded politicians into the belief that he was a strong man. It was only those mad and muddling politicians who could ever dream of putting the reserve of the British Army in a great battle under such a commander."¹⁴

With the passage of time after the war the honours came rolling in. In 1919 he was made a British Field-Marshal; in 1920 a member of the French Academy. As the years went on he toiled steadfastly away in a simple office in the Boulevard des Invalides in the capacity of adviser to the Council of Ambassadors, his fund of rich commonsense sustaining the nerves of successive statesmen harassed by the abundant crises of the aftermath of war.

He did not survive the war many years. Physically he aged rapidly after 1918, for the great strain of the responsibility and the tragedy of the war years had affected even his robust and ebullient physique. The tragic loss of his only son, Germain, in action in 1914 had been a severe blow which he had borne stoically but which, nevertheless, had left its mark.

On Wednesday, 20th March, 1929, he was stricken with a final heart attack and died in a matter of hours. Ever true to the spirit of the offensive the last words of the great soldier were "*Allons-y*"—"let us go."

¹⁴ *The War Memoirs of David Lloyd George.*

CORRESPONDENCE

(Correspondence is invited on subjects which have been dealt with in the JOURNAL, or which are of general interest to the Services. Correspondents are requested to put their views as concisely as possible, but publication of letters will be dependent on the space available in each number of the JOURNAL.—EDITOR.)

THE VOLUNTEERS

To the Editor of the R.U.S.I. JOURNAL.

SIR,—Colonel Jackson's statement in your November issue¹ that "no Volunteer units had been in existence in 1908 as armed forces of the Crown for hundreds of years" may have puzzled readers who remember the large number of volunteers of all arms then in existence. I have not the August edition by me but I presume he was referring to the age of individual units. From one point of view, up to the 1914 War, all the forces of the Crown were volunteers, conscription only existing in the Channel Islands for their local Militia. I am not quite sure when this conscription ended.

The Militia in this country could, I think, legally be recruited by ballot. The Volunteers were, like any army, largely infantry, but there were many units of Gunners and Sappers, in fact one of the criticisms of the new Territorial structure was that the number of guns was much reduced.

Volunteers and Militiamen were raised for home defence and could not be ordered out of the country without their own permission. I believe that the last time any Militia units served outside the United Kingdom was during the Crimean War, when a battalion of the Middlesex and one of the Wiltshires volunteered *en masse* and were sent to garrison Corfu.

As regards the re-forming of Army Cadets, no doubt Colonel Jackson is legally correct, but in fact they were re-formed by the County Associations who did the administration work, providing the Secretary and the Cadet Committee.

EDWARD LE BRETON,
Colonel.

5th December, 1958.

HOW 'MILITARY' IS THE ROYAL AIR FORCE?

SIR,—I found your recent article "How 'Military' is the Royal Air Force?"² by "Radix" stimulating, but like the curate's egg only good in parts. The author raises many controversial issues, one of which may even be his choice of title.

However there is one point I should particularly like to comment upon. It occurs in the following extract. "No one can seriously suggest—particularly in the age of nuclear warfare—that the airman will be needed in a ground combatant role. Even in the last war he was rarely, if ever, called upon to fight on the ground. And certainly under the present organization of the R.A.F. he is not trained to do so." This final sentence is simply just not true. The *R.A.F. Manual of Ground Defence*, A.P. 3226, Chap. I, states quite clearly the reasons why it is policy for airmen to be trained in the ground combatant role. Further, an agreed inter-Service policy has already allocated responsibility to the R.A.F. for its own local defence. To this end A.P. 3305 lays down very carefully to what standards R.A.F. personnel are to be trained in ground defence. Finally, even in the age of nuclear warfare, we still have cold war conditions and airmen serve abroad in areas of unrest. It is therefore evident that such personnel will have to be trained in the ground combatant role if airfields and associated vital equipment are to be defended. In such areas the personal security of the airman and his family may well be an important secondary consideration.

P. LOVATT,
Flight Lieutenant.

5th December, 1958.

¹ Page 573.

² See JOURNAL for November, 1958, p. 542.

SIR,—In his article "Radix" raises problems common to all three Services, although a far higher percentage of the R.A.F. is affected. I have commanded two static operational Army units. I have also been the Head of Establishment of a large civilian element, at the same time as being the C.O. of the military unit itself. There is a marked contrast between the voluntary discipline of the well-housed and better paid civilian tradesmen and the military discipline required of the soldiers; many of both doing identical operational work. The soldier has to guard the civilian and clean his place of work, all for less reward and more irksome restriction. Recruiting of Regulars from National Servicemen is negligible under such conditions, partly because the National Service tradesmen have all got good education, or careers already in progress. Nevertheless it is remarkable how cheerfully the men go at their work and stand up to difficult internal security conditions, despite the contrast with the civilian in physical conditions and restrictions. The chief reason for it is undoubtedly the firm but sympathetic control achieved by the much derided form of discipline practised. The R.A.F. approach to discipline has never appeared to me to be too happy or as effective as the Army one, especially overseas when internal security is threatened. If our defensive preparations are sound the likelihood of losing bases by nuclear operations will be remote, but the risk of losing them through civil disturbance is all too great in many parts of the world today. Technicians must be capable of taking charge in a military manner, if they are to produce reliable results under conditions of stress. The R.A.F. separates the outward forms of discipline from the operational work by specialization, and this appears to give its technicians an exaggerated prejudice against any form of military discipline.

Formal parades in any static operational unit like an air base or a base wireless station have almost died out because the men are always fully occupied operationally. This is a small but real loss on the psychological warfare side, because one of the responsibilities of Her Majesty's forces is to 'show the flag' as attractively as possible. Even a small party of uniformed men marching smartly to some job contributes to a feeling of confidence when seen by the public. All the same, I agree with "Radix" that ceremonial is impracticable in technical units, and that the outward forms of discipline should be as simple and relevant as possible. In practice such matters as marching short distances in small parties, inspection of turnout, smart saluting, and correct behaviour on entering someone's office are about all that is practised now. This minimum of forms gives the necessary psychological help to a young non-commissioned officer when he is commanding others; for example, when he has to ensure that dull maintenance routines are properly carried out by the young (and therefore immature) men we are hoping to recruit.

About one-fifth of the Army wage bill goes to civilians already, and more civilianization is planned; presumably this applies to all three Services. Against the background sketched above, "Radix's" quarrel appears to be with the trades unions and not with the uniformed Services. The Services have already come to terms with the trades unions, but he wants to introduce a third element in the form of a civilian service. This service would have to ignore many of the gains made by trades unions in their traditional fight for better conditions for less work, fewer risks, and smaller obligations for their members.

Such a civilian service would have many advantages from the point of view of the fighting Services. It could be inter-Service in form, and it could reabsorb all the many civilians who are now members of trades unions and working for the Admiralty, War Office, and Air Ministry. It should be possible to give careers to officers, non-commissioned officers, and men in this civilian service when they retire without rousing the strong opposition that has sometimes appeared when retired Servicemen are accepted by the existing Civil Service.

A civilian service using the principles given by "Radix" might be more in tune with the operational requirement, and perhaps less subject to 'Parkinson's Law' than the conventional trades union structure that is increasingly being introduced into the Services today. It will be interesting to see what develops in the future, and how it evolves.

D. T. W. GIBSON,

Lieut.-Colonel.

12th January, 1959.

THE NAVAL CRISIS OF 1909

SIR,—I read the above article in your November issue¹ with great interest and with some amusement. But what a disgraceful affair it was—disgraceful not only to the Government but also to Parliament as a whole.

One gets the impression that, but for pressure from outside, the Government would have continued to stint the Navy, even to the extent of risking the very existence of their country, for no better purpose than to conciliate their own Left Wing. The Conservatives were better, but even they seemed more interested in scoring points in the Party war than in the security of their country.

It was no time for economy. We ought to have strained every nerve to make our Navy as strong as possible. As it turned out, our margin of safety was just barely sufficient. It should have been far greater. As it was, at any time between 1914 and 1918, we could have lost the war in an afternoon, as Mr. Churchill put it. In such circumstances our Navy should have been double or treble that of Germany.

I believe I am right in saying that not one Member of Parliament, on either side, gave the slightest indication of being aware that the Government's first duty was to *prevent* war, or of knowing how this could be done. War can always be prevented by confronting the would-be aggressor nation with armaments as strong as its own, because this deprives it of the superiority in armaments that is absolutely necessary to it before it can embark upon its projected war of conquest.

It was just as necessary to prevent war on land as at sea; for, if Germany were to overrun France, the French ports and dockyards would be at her disposal and the naval threat to Britain would be enormously increased. The British Government's obvious duty was therefore to increase the British Army until the French and British Armies together were at least as strong as the German Army at all points. This would have prevented war without any doubt. If the Government knew this, they were guilty of preferring the appeasement of their Left Wing and the majority of their Press to the maintenance of peace and the safety of their country; if they did not know it, they were not fit to be in office.

The rot was widespread. The Opposition did far too little and the Foreign Office seem to have been just as bad as the Government. Surely it was their duty to point out to the Government that diplomacy was utterly futile without armaments to support it. The only really useful thing from that quarter came from the British Naval Attaché in Berlin, who reported to the Admiralty in 1908 that, in his opinion, Germany was working up for war and that she would go to war as soon as the Kiel Canal was reopened after enlargement. It was reopened in July, 1914.

I cannot agree with the statement that the race for naval supremacy was even a subsidiary cause of war. The Germans wanted war; we did not. The harder we raced the better for peace. If we had not raced, war would have come sooner than it did, and with disastrous results for us. A race for armaments never tends to produce war so long as the non-aggressor keeps up with the aggressor; for it deprives the aggressor of the lead in armaments which is a *sine qua non* of war. It naturally annoys the aggressor, and his propaganda against it is taken up by his fifth column in the rival country, as it was here, notably in the 1930's. Both the great wars came upon us because we failed to keep up in the race for armaments. Incidentally, our naval superiority in 1914—dangerously small though it was—did actually keep the peace at sea; for in all the four years of that war Germany never attempted to attack our fleet or to dispute our command of the sea.

H. C. B. PIPON,

Captain, Royal Navy.

10th January, 1959.

¹ Page 500.

GENERAL SERVICE NOTES

BAGHDAD PACT

MOVE OF HEADQUARTERS

It was announced on 23rd October, after a meeting of the Council of the Baghdad Pact in Ankara, that "owing to the present situation" the Governments of Great Britain, Pakistan, Persia, Turkey, and the U.S.A. had agreed that the Baghdad Pact headquarters should be temporarily set up in the Turkish capital, with retrospective effect from 17th October.

GREAT BRITAIN

CHIEF OF THE DEFENCE STAFF

It was announced on 31st December that H.M. The Queen has approved the appointment of Admiral of the Fleet The Earl Mountbatten of Burma as Chief of the Defence Staff with effect from July next, in succession to Marshal of the Royal Air Force Sir William Dickson.

IMPERIAL DEFENCE COLLEGE

The following were selected to attend the 1959 course which started in January:—

ROYAL NAVY.—Captain R. L. Alexander, D.S.O., D.S.C.; Captain P. M. Compston; Captain J. Ellerton, D.S.C.; Captain P. D. Gick, O.B.E., D.S.C.; Captain P. P. M. Green, A.M.I.E.E., A.M.Brit.I.R.E.; Captain H. T. Harrel; Captain D. H. Mason; Captain C. P. Norman, D.S.O., D.S.C.; Captain A. W. F. Sutton, D.S.C.; Captain A. F. Turner, D.S.C.

ARMY.—Brigadier P. H. W. Brind, D.S.O., O.B.E.; Brigadier R. A. Fyffe, D.S.O., O.B.E., M.C.; Brigadier D. L. Powell-Jones, D.S.O., O.B.E.; Brigadier D. A. K. Redman, O.B.E.; Colonel D. A. B. Clarke, O.B.E.; Colonel D. B. Egerton, O.B.E., M.C.; Colonel B. O. P. Eugster, D.S.O., O.B.E., M.C.; Colonel M. W. Prynne, O.B.E.; Colonel J. C. Winchester, M.C.; Colonel F. B. Wyldbore-Smith, D.S.O., O.B.E.

ROYAL AIR FORCE.—Air Commodore B. A. Chacksfield, O.B.E.; Air Commodore P. L. Donkin, C.B.E., D.S.O.; Air Commodore M. K. D. Porter, C.B.E.; Group Captain H. E. C. Boxer, O.B.E., A.D.C.; Group Captain A. A. Case, C.B.E.; Group Captain G. T. B. Clayton, D.F.C.; Group Captain F. O. S. Dobell, C.B.E.; Group Captain P. W. D. Heal, A.F.C.; Group Captain R. J. P. Prichard, O.B.E., D.F.C., A.F.C.; Group Captain S. G. Walker, O.B.E.

CANADA.—Brigadier A. F. B. Knight, O.B.E., C.D.; Group Captain W. L. Gillespie; Mr. T. Le M. Carter, Department of External Affairs; Superintendent K. W. N. Hall, Royal Canadian Mounted Police.

AUSTRALIA.—Captain J. S. Mesley, M.V.O., D.S.C., R.A.N.; Captain F. L. George, R.A.N.; Brigadier M. F. Brogan, O.B.E.; Air Commodore G. C. Hartnell, C.B.E.; Group Captain W. D. Mason, O.B.E.; Mr. J. B. R. Livermore, Department of the Army.

PAKISTAN.—Commodore Abdur Rashid; Major-General Kazi Abdul Rahim Khan; Mr. Akthar Iqbal, P.F.S.; Mr. S. M. Murshed, P.F.S.

INDIA.—Major-General J. S. Dhillon; Air Commodore R. Rajaram, D.F.C.

MALAYA.—Inche Abdul Kadir Bin Shamsuddin.

CIVIL SERVICE (FOREIGN SERVICE).—Mr. S. M. Mackenzie, D.S.C.; Mr. I. D. Scott, C.I.E.; Mr. J. O. Wright, D.S.C.

CIVIL SERVICE (COLONIAL SERVICE).—Mr. C. O. Lawson (Nigeria); Mr. R. E. Wainwright (Kenya).

HOME CIVIL SERVICE (ADMINISTRATORS).—Mr. G. C. B. Dodds, Admiralty; Mr. R. W. D. Fowler, Commonwealth Relations Office; Mr. R. Haynes, Air Ministry; Mr. J. P. Morton, Security Service; Mr. J. E. Poulden, C.B.E., G.C.H.Q.; Mr. R. St. J. Walker, Ministry of Supply.

HOME CIVIL SERVICE (SCIENTISTS).—Mr. H. W. Pout, Admiralty; Mr. R. E. Sainsbury, Ministry of Supply.

UNITED STATES.—Captain Wendell W. Bemis, U.S.N.; Colonel Tobias B. Philbin, Jr.; Colonel Wilson R. Wood, U.S.A.F.; Mr. Francis Edward Meloy, Jr., U.S. Foreign Service.

REPORT OF THE GRIGG COMMITTEE

The Advisory Committee under Sir James Grigg, which was set up in December, 1957, to examine the factors bearing on the willingness of men and women to serve in the armed forces and to make recommendations, published its report on 4th November.

The Government's acceptance of the major recommendations was announced in a White Paper (Cmd. 545, price 1s.) on the same day. The recommendations accepted included the following:—

- (a) Higher pensions for other ranks.
- (b) Higher pensions for widows.
- (c) Larger 'disturbance' and educational allowances.
- (d) Biennial reviews of Service pay and pensions.
- (e) More promotion from the ranks.
- (f) Improvement of uniform and equipment for men and women.
- (g) The need for improved accommodation.

The new rates of pensions and allowances will come into force on 1st April, 1959.

THE DUKE OF EDINBURGH'S TROPHY

The Duke of Edinburgh's trophy for 1958 was won by the 1st Battalion, Welsh Guards, stationed at Pirbright; the 1st Battalion, The Wiltshire Regiment (Cyprus), was second; and the 1st Battalion, The Queen's Own Cameron Highlanders (U.K.), third.

The 4th Battalion, The Wiltshire Regiment, T.A., won the Duke of Edinburgh's Shield for 1958.

AMERICAN MEMORIAL CHAPEL

H.M. The Queen, accompanied by the Duke of Edinburgh, attended the Dedication of the American Memorial Chapel in St. Paul's Cathedral on 26th November and afterwards unveiled the Memorial Inscription. Mr. Richard Nixon, Vice-President of the United States, and 12 American citizens, selected from the next of kin of the 28,000 American dead commemorated in the Chapel's Roll of Honour, were among the congregation.

The Memorial Chapel was constructed as a gift from the people of Britain in memory of those citizens of the United States who died in the 1939-45 War while based in this country.

THE LUNEBURG VICTORY STONE

Some months ago it was decided, in agreement with the West German Government, that Luneburg Heath should be returned to the German authorities for use for training and as a firing range by the German Army.

As a result of this decision, it was also agreed that the Victory Stone, erected on the Heath to commemorate the surrender, in May, 1945, of the German armed forces, should be moved from its original site to one of the Service cadet colleges in this country.

It has now been re-sited at the Royal Military Academy, Sandhurst, and to mark the completion of its re-erection, Field-Marshal The Viscount Montgomery of Alamein visited Sandhurst on 29th November, 1958, and addressed a parade at which cadets at the R.M.A. were joined by a representative party from the Royal Naval College, Greenwich, and the R.A.F. College, Cranwell; a reminder of the fact that the memorial commemorates the achievements in the 1939-45 War of all the armed forces. Senior officers of all three Services were also present.

CHRISTMAS ISLAND

On 1st October, Christmas Island, in the Indian Ocean, became Australian territory under an Order-in-Council which provided for the transfer of the administration of the island from the United Kingdom to the Commonwealth of Australia.

FOREIGN**JORDAN****WITHDRAWAL OF BRITISH FORCES**

The withdrawal of British forces from Jordan took place between 25th and 29th October, by which date nearly all British forces in Jordan had been moved by air to Cyprus or the United Kingdom. Some of the troops with much material and equipment were withdrawn by sea from Akaba between 20th October and 2nd November.

LEBANON**WITHDRAWAL OF U.S. TROOPS**

The last of the American troops in the Lebanon were withdrawn by 26th October. Part withdrawal of U.S. troops had taken place during August and September.

NOTICE

IN SOME REMEMBRANCE
will you send a donation to

THE LEAGUE OF REMEMBRANCE (1914-1945)

Patron-in-Chief

H.M. Queen Elizabeth the Queen Mother

Founded in 1914 to assist the widows and dependants of officers of the three Services, and the Nursing Services, who work happily making Hospital Dressings. They receive a grant-in-aid for their services. Secretary, 32, Great Ormond Street, London, W.C.1.

NAVY NOTES

H.M. THE QUEEN

AIDE-DE-CAMP.—Colonel M. Price, D.S.O., O.B.E., R.M., has been appointed a Royal Marine Aide-de-Camp to The Queen in succession to Colonel B. W. de Courcy-Ireland, R.M., with effect from 2nd January, 1959.

HONORARY CHAPLAIN.—The Rev. C. Davies, O.B.E., R.N., has been appointed an Honorary Chaplain to The Queen from 5th December, 1958, in succession to the Rev. A. W. M. Watson, O.B.E., R.N.

HONORARY PHYSICIANS.—Surgeon Captain T. G. B. Crawford has been appointed an Honorary Physician to The Queen with effect from 17th November, 1958, in succession to Surgeon Captain C. B. Nicholson. Surgeon Captain J. G. Gent has been appointed an Honorary Physician to The Queen with effect from 30th November, 1958, in succession to Surgeon Rear-Admiral R. L. G. Proctor, C.B.

EAST INDIES COLOUR.—The Queen's Colour of the East Indies Station, now abolished, was paraded on 6th November on Horse Guards Parade before Vice-Admiral Sir Hilary Biggs, K.B.E., C.B., D.S.O., the hundredth and last Commander-in-Chief of the Station. It was afterwards escorted to St. Martin in the Fields, the parish church of the Admiralty, and there laid up in perpetuity. An address was given by the Chaplain of the Fleet, the Ven. Archdeacon Darrell Bunt, C.B., O.B.E.

The Duke of Gloucester has been appointed an Honorary Commodore in the Royal Naval Reserve with effect from 1st November, 1958.

HONOURS AND AWARDS

The following were included in the New Year Honours issued on 1st January :—

K.C.B.—Vice-Admiral Alexander N. C. Bingley, C.B., O.B.E.; Vice-Admiral Robert D. Watson, C.B., C.B.E.

C.B.—Rear-Admiral V. C. Begg, D.S.O., D.S.C.; Rear-Admiral K. St. B. Collins, O.B.E., D.S.C.; Rear-Admiral N. A. Copeman, D.S.C.; Rear-Admiral J. Lee-Barber, D.S.O.; Major-General R. W. Madoc, D.S.O., O.B.E.; Rear-Admiral G. A. F. Norfolk, D.S.O.; Major-General I. H. Riches, D.S.O.; Rear-Admiral R. T. Sandars; Rear-Admiral B. W. Taylor, D.S.C.; Rear-Admiral M. S. Townsend, D.S.O., O.B.E., D.S.C.

G.B.E.—Admiral Sir Frederick R. Parham, K.C.B., C.B.E., D.S.O.

K.B.E.—Vice-Admiral Arthur R. Pedder, C.B.; Vice-Admiral Guy B. Sayer, C.B., D.S.C.

BOARD OF ADMIRALTY

The Queen has been pleased, by Letters Patent under the Great Seal, bearing date the 1st day of November, 1958, to appoint the following to be Commissioners for Executing the Office of Lord High Admiral of the United Kingdom :—

Group Captain the Right Hon. George Nigel, Earl of Selkirk, O.B.E., A.F.C.
Admiral of the Fleet the Right Hon. Louis F. A. V. N., Earl Mountbatten of Burma, K.G., G.C.B., G.C.S.I., G.C.I.E., G.C.V.O., D.S.O.
Vice-Admiral Douglas E. Holland-Martin, C.B., D.S.O., D.S.C.
Admiral Sir J. Peter L. Reid, K.C.B., C.V.O.
Rear-Admiral Nicholas A. Copeman, D.S.C.
Admiral Sir Caspar John, K.C.B.
Vice-Admiral Sir Manley L. Power, K.C.B., C.B.E., D.S.O.
Commander Robert A. Allan, D.S.O., O.B.E.
The Hon. Thomas G. D. Galbraith.
Sir John G. Lang, G.C.B.

FIRST SEA LORD.—The Queen has approved the appointment of Admiral Sir Charles E. Lambe, G.C.B., C.V.O., to be a Lord Commissioner of the Admiralty, First Sea Lord, and Chief of Naval Staff, in succession to Admiral of the Fleet the Earl Mountbatten of Burma, K.G., etc., to take effect in May, 1959.

FLAG APPOINTMENTS

PORTSMOUTH.—Rear-Admiral N. E. H. Clarke to be Command Engineer Officer and Chief Staff Officer (Technical) on the staff of the Commander-in-Chief, Portsmouth, in succession to Rear-Admiral G. O. Naish, C.B. (November, 1958).

AIRCRAFT.—Rear-Admiral E. Mill, O.B.E., to be Director General, Aircraft, in succession to Rear-Admiral J. P. W. Furse, C.B., O.B.E. (March, 1959).

SEA CADETS.—Rear-Admiral J. E. H. McBeath, C.B., D.S.O., D.S.C. (Retired), to be Honorary Commodore, Sea Cadet Corps, in succession to Vice-Admiral Sir Gilbert O. Stephenson, K.B.E., C.B., C.M.G. (Retired) (1st November, 1958).

FAR EAST.—Captain R. E. Portlock, O.B.E., promoted to Rear-Admiral to date 7th January, 1959, and to be Chief of Staff to the Commander-in-Chief, Far East Station, in succession to Commodore C. H. Hutchinson, D.S.O., O.B.E. (March, 1959).

RETIREMENTS AND PROMOTIONS

Vice-Admiral Sir Hilary W. Biggs, K.B.E., C.B., D.S.O., placed on the Retired List (6th October, 1958).

Rear-Admiral J. Dent, C.B., O.B.E., placed on the Retired List (15th October, 1958).

Rear-Admiral G. V. M. Dolphin, C.B., D.S.O., placed on the Retired List (30th October, 1958).

Vice-Admiral Sir A. Gordon Hubback, K.B.E., C.B., placed on the Retired List (3rd November, 1958).

Acting Vice-Admiral Sir St. John R. J. Tyrwhitt, Bt., C.B., D.S.O., D.S.C., promoted to Vice-Admiral (3rd November, 1958).

Vice-Admiral Sir Robert F. Elkins, K.C.B., C.V.O., O.B.E., placed on the Retired List (30th December, 1958).

Rear-Admiral Sir Charles E. Madden, Bt., C.B., promoted to Vice-Admiral (30th December, 1958).

Rear-Admiral G. O. Naish, C.B., placed on the Retired List (1st January, 1959).

Surgeon Captain W. P. E. McIntyre promoted to Surgeon Rear-Admiral (24th November, 1958).

Surgeon Rear-Admiral R. L. G. Proctor, C.B., placed on the Retired List (30th November, 1958).

HALF-YEARLY LISTS

The following retirement and promotions were announced to date 7th January, 1959 :—

Retirement.—Vice-Admiral Sir Geoffrey Barnard, K.C.B., C.B.E., D.S.O.

Promotions : To Vice-Admiral.—Rear-Admiral P. Dawnay, C.B., M.V.O., D.S.C.

To Rear-Admiral.—Captain (Acting Rear-Admiral) E. T. Larken, O.B.E., A.D.C. ; Captain (Commodore First Class) C. H. Hutchinson, D.S.O., O.B.E. ; Captain H. C. Hogger, D.S.C. ; A.D.C.

The following promotions were announced to date 31st December, 1958 :—

General List : Seaman Specialists—Commander to Captain.—H. D. Ellis ; D. N. Forbes, D.S.C. ; R. H. Graham, M.V.O., D.S.C. ; I. D. McLaughlan, D.S.C. ; T. G. V. Percy, O.B.E., D.S.C. ; J. Bitmead, D.S.O. ; B. C. G. Place, V.C., D.S.C. ; J. R. W. Groves ; J. C. Y. Roxburgh, D.S.O., D.S.C. ; A. R. E. Bishop ; G. C. Baldwin, D.S.C. ; I. W. Jamieson, D.S.C.

General List : Engineer Specialists—Commander to Captain.—G. W. Gay, M.B.E., D.S.C.; W. R. Stewart; H. G. Southwood, D.S.C.; P. H. C. Illingworth; D. N. Callaghan.

General List : Supply and Secretariat Specialists—Commander to Captain.—W. L. F. Hughes; G. A. Henderson.

General List : Electrical Specialists—Commander to Captain.—F. J. Perks; A. W. Bradshaw.

Instructor Branch—Instructor Commander to Instructor Captain.—W. D. Jenkin, M.B.E. (Acting Instructor Captain).

Medical Branch—Surgeon Commander to Surgeon Captain.—G. D. Wedd, O.B.E.; D. P. Gurd; P. K. Fraser; B. S. Lewis, D.S.C.

Dental Branch—Surgeon Commander (D) to Surgeon Captain (D).—S. R. Wallis.

EXERCISES AND CRUISES

HOME WATERS.—The Commander-in-Chief, Home Fleet, Admiral Sir William Davis, in the fast minelayer *Apollo*, paid an official visit to the City of London from 7th to 13th October. The *Apollo* berthed at Battle Bridge Tier, and on leaving proceeded to Rotterdam.

SEASLUG TRIALS.—H.M.S. *Girdle Ness* returned to Devonport Dockyard on 26th November from the Mediterranean, where she had been engaged on firing trials and evaluation of the Seaslug ship-to-air guided weapon.

MEDITERRANEAN EXERCISES.—A series of exercises was carried out off the south of France in November under N.A.T.O. auspices. Units of the Mediterranean Fleet, under Rear-Admiral R. A. Ewing, Flag Officer Flotillas, in the cruiser *Sheffield*, joined forces with ships of the Canadian Atlantic Fleet under Commodore M. A. Medland in the aircraft carrier *Bonaventure*, and units of the French Mediterranean Fleet under Vice-Admiral E. Jozan in the cruiser *De Grasse*.

TANKER SALVAGE.—While exercising in the Gulf of Oman on 13th September, the *Bulwark* and *Loch Killisport* intercepted distress signals indicating that the Liberian tanker *Melika* and French tanker *Fernand Gilabert* had collided some 150 miles to the southward and that both ships were ablaze and abandoned. Both warships proceeded to assist. Aircraft from the *Bulwark* located the *Melika* and flew doctors to her by helicopter, afterwards evacuating injured men by the same means. The *Melika*, still burning, was taken in tow by the *Bulwark* to Muscat. Meanwhile the French tanker was assisted by the *St. Bride's Bay* and *Loch Killisport*, and both frigates in turn towed her slowly to Karachi. During November, the *Melika* was towed by H.M. Tug *Warden* from the Gulf of Oman to Palermo, about 3,800 miles.

PERSONNEL

SAIL TRAINING FOR CADETS.—The Admiralty have decided to give Dartmouth cadets more sail training. Five new seamanship training craft, as they will be called, are to be delivered in 1959. The new concept of training will include off-shore cruising and ocean racing whenever opportunity offers. Their Lordships are convinced that this training will foster leadership, initiative, discipline, and sea-sense, and provide a substitute for the experience which young officers formerly acquired in boatwork during their time as midshipmen. An order for the five new craft has been placed with Morgan Giles, Ltd., Teignmouth.

MATERIEL AND DOCKYARDS

SHIP COMPLETIONS.—H.M.S. *Duncan*, an anti-submarine frigate of the "Blackwood" class, commissioned on 20th October at the Woolston yard of John I. Thornycroft & Co., Ltd. The *Duncan* was allocated to the Arctic Division of the Fishery Protection Squadron to fly the broad pennant of the Commodore, F.P.S.

H.M.S. *Rorqual*, second of the "Porpoise" class of operational submarines, was commissioned at the Barrow yard of Vickers-Armstrongs, Ltd., on 24th October, and officially accepted on the 27th. H.M.S. *Grampus*, third of this class, was commissioned at the Birkenhead yard of Cammell Laird & Co., Ltd., on 19th December.

The R.F.A. *Reliant*, formerly a grain carrier, left Chatham on 4th November for the Far East to take up duties as the Royal Navy's first air stores issuing ship capable of replenishing aircraft carriers at sea. She has an endurance at sea of 50 days' steaming at 16 knots, and carries over 30,000 different types of aircraft spares and general stores.

NUMBERS OF SHIPS.—In reply to a question in the House of Commons on 10th December, the Parliamentary Secretary, Commander R. A. Allan, said that as forecast in the Explanatory Statement relating to the financial year 1958-59, there will be a net reduction of two cruisers, three destroyers, and two submarines, and an increase of four frigates in the operational Fleet. In the same period one new cruiser, five new frigates, and four new submarines have or will have been commissioned.

CONVERSIONS FOR TROOPSHIPS.—It was announced in the House of Commons on 2nd December that the suggestion is being examined to convert the light fleet carriers *Ocean*, *Glory*, *Theseus*, and *Unicorn*, at present scheduled to be scrapped, as regular troop carriers.

MALTA DOCKYARD.—H.M. Government have agreed that, subject to the completion of a satisfactory agreement, the Maltese company which is being set up by Messrs. C. H. Bailey of South Wales should assume full responsibility for Malta Dockyard not later than 30th March, 1959. Vice-Admiral Sir Gordon Hubback, late Fourth Sea Lord and Vice-Controller, whose retirement was announced on 3rd November, is to be Managing Director of the company.

ROYAL NAVAL RESERVE

The amalgamation of the Royal Naval Reserve and Royal Naval Volunteer Reserve, announced in both Houses of Parliament on 4th December, 1957, took effect on 1st November, 1958. The Reserve, as reorganized, consists of 15 different training lists, and the list to which each officer or rating is attached depends on his obligations for continuous or non-continuous training.

No change is involved in the title, status, or training of seagoing Merchant Service officers at present serving in the R.N.R., or of officers and ratings of the Fishing Fleets serving in the R.N.R. (Patrol Service). They form Lists 1 and 2 respectively in the R.N.R. Officers of the R.N.R. Air Branch have been transferred to the Special Air List, on which there is no training obligation.

R.N.V.R. officers and ratings are being transferred to Lists 3 to 15 of the R.N.R., depending on the amount of training necessary to fit them to take their place in the Royal Navy in the event of mobilization. This will vary from 14 days' continuous training plus 80 hours (or eight week-ends) non-continuous training annually for those on List 3, to no training obligations for fully trained officers and ratings on List 15.

The position of officers holding appointments in the R.N.V.R. for service with the Sea Cadet Corps and Combined Cadet Force (Naval Sections) is still under consideration. The Royal Marine Forces Volunteer Reserve and the Royal Naval Volunteer Supplementary Reserve are not affected.

The following message to the Fleet was issued by the Board of Admiralty :—

"The unification of the Naval Reserves affords Their Lordships a welcome opportunity to express their appreciation of the services rendered in the past by the officers and ratings of all branches of the Reserves both in war and peace.

"Their Lordships are confident that the fine spirit of volunteer service shown in the past will continue to increase as a result of this new partnership and that the reorganized Royal Naval Reserve will grow in efficiency to meet the ever-changing needs of modern warfare."

HALF-YEARLY PROMOTIONS.—The following have been made to date 31st December, 1958:—

List 1, Seaman Branch : Commander to Captain.—A. E. Smith, R.D.; H. G. Chesterman, D.S.C., R.D.; R. E. J. Fox, R.D.

List 3-15, Seaman Branch : Commander to Captain.—J. W. Whittle, D.S.C., V.R.D. (Acting Captain); B. Smith, V.R.D. (Acting Captain).

List 3-15, Engineering Branch : Commander to Captain.—W. G. Smith, V.R.D.

List 3-15, Dental Branch : Surgeon Commander (D) to Surgeon Captain (D).—A. C. Fuller, V.R.D.

List 3-15, Supply and Secretariat Branch : Commander to Captain.—W. T. Horsfall, V.R.D.

ROYAL MARINES

COMMANDANT GENERAL.—The appointment was announced on 29th October of Major-General I. H. Riches, D.S.O., R.M., to be promoted Lieutenant-General and to be Commandant General Royal Marines, in succession to General Sir Campbell R. Hardy, K.C.B., C.B.E., D.S.O., the appointment to take effect about mid-February, 1959.

PLYMOUTH GROUP.—Colonel M. C. Cartwright-Taylor, R.M., is to be promoted Major-General on 16th February, 1959, and appointed Major-General Commanding Plymouth Group, Royal Marines, in succession to Major-General R. W. Madoc, D.S.O., O.B.E., R.M.

HONORARY COLONEL COMMANDANT.—Major-General H. T. Tollemache, C.B., C.B.E., has been appointed Honorary Colonel Commandant, Portsmouth Group, Royal Marines, in succession to Major-General H. T. Newman, C.B., C.B.E., with effect from 31st October, 1958.

HALF-YEARLY PROMOTIONS.—The following have been made to date 31st December, 1958:—

Lieutenant-Colonel to Colonel.—F. D. G. Bird, O.B.E.

Major to Lieutenant-Colonel.—J. C. d'E. Coke, D.S.C.; A. J. S. Crockett.

R.M.F. Volunteer Reserve : Major to Lieutenant-Colonel.—N. A. Essex, M.C., V.R.D.

CANADA

MEDITERRANEAN EXERCISES.—A task force of the Royal Canadian Navy took part in the N.A.T.O. exercises off the south of France in November. It consisted of the aircraft carrier *Bonaventure*, flying the broad pennant of Commodore M. A. Medland, Senior Canadian Officer Afloat, and the destroyer escorts *St. Laurent*, *Ottawa*, and *Haida*. The force arrived at Malta on 24th October, and after the exercises came to Portsmouth on 28th November for a week, being joined there by the destroyer *St. Croix*.

HALF-YEARLY PROMOTIONS.—The following were announced by the Department of National Defence, Ottawa, to be effective 1st January, 1959:—

Executive Branch : Commander to Captain.—R. Phillips.

Electrical Branch : Commander to Captain.—J. C. Gray.

Medical Branch : Surgeon Commander to Surgeon Captain.—G. W. Chapman; W. J. Elliot.

AUSTRALIA

FLAG APPOINTMENTS.—Rear-Admiral G. G. O. Gatacre, Deputy Chief of Naval Staff, was appointed from 20th January, 1959, to be Flag Officer Commanding H.M. Australian Fleet in succession to Rear-Admiral H. M. Burrell, whose appointment as Chief of the Australian Naval Staff on the retirement of Vice-Admiral Sir Roy Dowling had previously been announced. Captain O. H. Becher, commanding H.M.A.S.

Melbourne, was appointed D.C.N.S. in succession to Rear-Admiral Gatacre, with the acting rank of Rear-Admiral.

HALF-YEARLY PROMOTION.—The following was announced by the Australian Commonwealth Navy Board to date 31st December, 1958 :—

Seaman Specialists : Commander to Captain.—E. J. Peel, D.S.C.

NEW ZEALAND

OTAGO LAUNCHED.—H.R.H. Princess Margaret performed the naming ceremony on 11th December at the launch of the *Otago* at the Woolston yard of John I. Thornycroft & Co. This ship is the first of a planned squadron of "Whitby" class frigates for the R.N.Z.N., and it is the first time in the history of British naval construction that a vessel has been built entirely for New Zealand. The First Lord, Third Sea Lord, and Secretary of the Admiralty were among those present.

INDIA

NEW FRIGATES.—The anti-aircraft frigate *Beas* was launched on 9th October at the yard of Vickers-Armstrongs, Ltd., at Newcastle-on-Tyne. The anti-submarine frigate *Kuthar* was launched on 14th October at the yard of J. Samuel White & Co., Ltd., Cowes, Isle of Wight. The new frigates *Brahmaputra* and *Khukri* arrived at Bombay from Great Britain on 9th November.

CARRIER AIRCRAFT.—It was announced in the Lower House at Delhi on 18th December that the Indian Government will buy British Sea Hawk jet fighter aircraft for the aircraft carrier *Hercules*, which was bought from Great Britain in 1957 and is now being refitted and modernized.

PAKISTAN

DESTROYER TRANSFERRED.—At a ceremony at the yard of J. Samuel White & Co., Ltd., Cowes, on 16th December, H.M.S. *Charity*, a destroyer completed in 1945 and refitted and modernized in 1957, was formally accepted by the United States on purchase and then transferred to Pakistan as part of the mutual assistance programme which the U.S.A. is undertaking for that country. The vessel was renamed P.N.S. *Shah Jehan*.

FOREIGN

ARGENTINA

AIRCRAFT CARRIER.—At Portsmouth Dockyard on 4th November, the Argentine flag was formally hoisted in the aircraft carrier *Independencia*, late H.M.S. *Warrior*, which was purchased from the Royal Navy in July. The Argentine Naval Attaché in London, Rear-Admiral B. Moritan Colman, handed over the ship to Captain Carlos A. Sanchez Sanudo, who commands her. After trials, the vessel left for Buenos Aires on 10th December.

CHILE

NEW DESTROYER.—The destroyer *Almirante Riveros*, 2,730 tons, was launched by Vickers-Armstrongs, Ltd., at Barrow-in-Furness on 12th December.

FRANCE

N.A.T.O. APPOINTMENT.—Vice-Admiral Pierre Barjot, late Maritime Prefect of Toulon, was appointed from 1st November as Naval Deputy at Supreme Headquarters Allied Powers, Europe, in succession to Admiral Sala, who has retired after 43 years' service.

SUBMARINE RETURNED.—H.M. submarine *Spiteful*, which had been on loan to the French Navy since January, 1952, under the name of *Sirene*, was returned from Toulon to the Royal Navy at Gosport on 22nd October.

GERMANY

FRIGATES FROM R.N.—H.M.S. *Oakley*, the first of seven frigates bought in 1957 for the German Federal Navy, was formally accepted at Liverpool on 2nd October. The vessel on arriving at Bremerhaven later in that month was commissioned as the *Gneisenau*. H.M.S. *Actaeon*, the second frigate, was formally handed over at Newcastle-on-Tyne on 9th December.

FIRST AIR GROUP.—The First Air Arm Group of the Federal Navy, which had been equipped with British aircraft and trained at air stations of the Fleet Air Arm in the United Kingdom, was inspected at Jagel airfield, near Schleswig, on 29th October by Vice-Admiral F. Ruge, Chief of Naval Staff at the Federal Ministry of Defence. The Flag Officer Air (Home), Vice-Admiral Sir Walter Couchman, and Flag Officer Flying Training, Rear-Admiral D. R. F. Cambell, were among those who witnessed the ceremony.

SUBMARINE VISIT.—The submarine *Hecht*, 250 tons, accompanied by the depot ship *Ems* and tug *Passat*, paid an operational visit to Portsmouth in November, arriving on the 11th. Her ship's company, and that of the other German submarine *Hai* who made the passage in the tenders, had a four-day intensive course in submarine escape drill at Fort Blockhouse.

GREECE

SUBMARINES RETURNED.—The submarines *Argonaftis* (ex-*Virulent*) and *Triaina* (ex-*Volatile*), which had been on loan from the Royal Navy since the War, were returned at Malta on 30th September, escorted by the tank landing ship *Kenios*. The latter had on board a number of small landing craft which were also being returned.

ISRAEL

SUBMARINES FROM R.N.—H.M.S. *Springer*, the first of two submarines which H.M. Government had agreed to sell to the Government of Israel, was transferred at Portsmouth on 9th October, to be renamed *Tanin* (or *Crocodile*). The second submarine to be sold will be the *Sanguine*. This sale followed the acquisition by the United Arab Republic of six Soviet submarines of the W-class.

UNITED STATES

CASUALTY.—Rear-Admiral L. Southerland, Commander of the U.S. Seventh Fleet aircraft carriers in the Pacific, was killed on 15th November when a helicopter in which he had flown from the carrier *Lexington* crashed and caught fire in Okinawa.

SEAWOLF RECORD.—The atomic submarine *Seawolf* surfaced off Long Island Sound on 6th October after being submerged for 60 days since 7th August. Her record was nearly twice that of the previous record of 31 days set up by the *Skate* and *Seawolf* on 26th May, 1958.

ARMY NOTES

GREAT BRITAIN

H.M. THE QUEEN

The Queen, accompanied by the Duke of Edinburgh, unveiled the Commonwealth Land Forces Memorial to 3,500 men and women who died during the 1939-45 War and have no known graves, at Brookwood Military Cemetery on 25th October.

Queen Elizabeth the Queen Mother, as Colonel-in-Chief, visited the 1st Battalion, The Black Watch (Royal Highland Regiment), at Rufford Barracks, Edinburgh, on 18th October, and The Queen's Bays (2nd Dragoon Guards) at Tidworth on 1st November.

The Duke of Edinburgh, as Colonel-in-Chief, presented the Guidon on behalf of The Queen to The Queen's Royal Irish Hussars at Hohne, Germany, on 24th October.

The Duke of Gloucester, Colonel-in-Chief, The Rifle Brigade, on 6th November took the Salute at a Parade at the Green Jackets Depot, Winchester, to mark the introduction of the new Green Jackets Brigade Badge and of the new titles, 1st Green Jackets, 43rd and 52nd; 2nd Green Jackets, The King's Royal Rifle Corps; 3rd Green Jackets, The Rifle Brigade.

The Queen has been graciously pleased to approve the following appointments:—

TO BE AIDE-DE-CAMP (GENERAL) TO THE QUEEN.—General Sir Dudley Ward, K.C.B., K.B.E., D.S.O. (29th November, 1958), vice General Sir Nevil C. D. Brownjohn, G.B.E., K.C.B., C.M.G., M.C., retired.

TO BE AIDES-DE-CAMP TO THE QUEEN.—Colonel (Temporary Brigadier) N. Molony, B.Sc., M.I.Mech.E. (1st September, 1958), vice Brigadier J. A. Marshall, O.B.E., B.Sc., retired; Brigadier F. W. B. Parry (11th September, 1958), vice Brigadier A. C. F. Jackson, C.V.O., C.B.E., retired; Brigadier J. M. McNiell, M.B.E. (12th September, 1958), vice Major-General G. R. Thomas, C.B.E., promoted; Colonel H. F. Jackson, O.B.E., T.D. (22nd November, 1958), vice Colonel (Honorary Brigadier) Sir George S. Harvie-Watt, Bart., T.D., Q.C., D.L., M.P., tenure expired; Brigadier A. H. Dowson, O.B.E., B.A. (27th November, 1958), vice Brigadier W. J. Cardale, retired.

TO BE HONORARY PHYSICIAN TO THE QUEEN.—Major-General T. F. M. Woods, O.B.E., M.D., M.R.C.P.(I.) (8th January, 1959), vice Major-General F. J. O'Meara, C.B., Q.H.P., M.D., F.R.C.P.(I.).

TO BE COLONELS COMMANDANT.—Of the Royal Tank Regiment, Lieut.-General Sir Harold E. Pyman, K.C.B., C.B.E., D.S.O. (1st January, 1959), vice Major-General N. W. Duncan, C.B., C.B.E., D.S.O., resigned; of the Royal Regiment of Artillery, Major-General W. R. Goodman, C.B., D.S.O., M.C. (30th December, 1958); of the Corps of Royal Engineers, Major-General G. N. Tuck, C.B., O.B.E., A.M.I.E.E. (1st October, 1958), vice General Sir Edwin L. Morris, K.C.B., O.B.E., M.C., and Major-General J. C. Walkey, C.B., C.B.E. (10th December, 1958), vice Major-General Sir Eustace Tickel, K.B.E., C.B., M.C., tenure expired; of the Royal Corps of Signals, Major-General A. E. Morrison, C.B., O.B.E. (1st January, 1959), vice Major-General C. H. H. Vulliamy, C.B., D.S.O., tenure expired; of the 3rd Green Jackets, The Rifle Brigade, General Sir Francis W. Festing, G.C.B., K.B.E., D.S.O., M.C. (7th November, 1958).

TO BE COLONELS OF REGIMENTS.—Of the 1st The Queen's Dragoon Guards, on formation, Colonel (Honorary Brigadier) G. E. Tiarks (1st January, 1959); of The Queen's Own Hussars, on formation, Major-General R. Younger, C.B., C.B.E., D.S.O., M.C. (3rd November, 1958); of The Queen's Royal Irish Hussars, on formation, the Rt. Hon. Sir Winston L. S. Churchill, K.G., O.M., C.H., T.D., LL.D., M.P. (24th October, 1958); of The Royal Lincolnshire Regiment, Brigadier R. H. L. Oulton, C.B.E. (5th October, 1958), vice Colonel (Honorary Major-General) J. A. Griffin, D.S.O., tenure expired; of The Royal Highland Fusiliers (Princess Margaret's Own Glasgow and Ayrshire Regiment), on formation, Major-General R. A. Bramwell Davis (20th January,

1959); of The Lancashire Regiment (Prince of Wales's Volunteers), on formation, Major-General W. H. Lambert, C.B., C.B.E. (1st July, 1958); of The Sherwood Foresters (Nottinghamshire and Derbyshire Regiment), Major-General C. B. Fairbanks, C.B., C.B.E. (9th November, 1958), vice Major-General P. N. White, C.B., C.B.E., tenure expired; of the Somaliland Scouts, Colonel (Temporary Brigadier) O. G. Brooke, C.B.E., D.S.O. (8th October, 1958), vice Major-General A. R. Chater, C.B., D.S.O., O.B.E., tenure expired.

REPRESENTATIVE COLONELS COMMANDANT, 1959.—The following have been appointed :—

Royal Armoured Corps (Cavalry Wing).—Air Marshal Sir John Baldwin, K.B.E., C.B., D.S.O. *Royal Tank Regiment.*—Major-General H. R. B. Foote, V.C., C.B., D.S.O.

Royal Regiment of Artillery.—Major-General E. B. de Fonblanque, C.B., C.B.E., D.S.O.

Corps of Royal Engineers.—Major-General N. A. Coxwell-Rogers, C.B., C.B.E., D.S.O.

Royal Corps of Signals.—Major-General M. S. Wheatley, C.B., C.B.E., M.I.E.E.

Royal Army Service Corps.—Major-General Sir Cecil Smith, K.B.E., C.B., M.C.

Royal Army Medical Corps.—Major-General E. P. N. Creagh, C.B., M.B., M.R.C.P.

Royal Army Ordnance Corps.—Major-General Sir Neville Swiney, K.B.E., C.B., M.C.

Corps of Royal Electrical and Mechanical Engineers.—Major-General W. A. Lord, C.B., C.B.E., M.Eng., M.I.Mech.E., M.I.E.E.

Royal Army Dental Corps.—Major-General D. J. Muil, C.B., O.B.E., Q.H.D.S.

ARMY COUNCIL

The Queen has been pleased by Letters Patent under the Great Seal bearing date the 1st day of November, 1958, to appoint the following to be Her Majesty's Army Council :—

Captain the Rt. Hon. A. C. J. Soames, C.B.E.—*President.*

Captain H. J. Amery—*Vice-President.*

General Sir Francis W. Festing, G.C.B., K.B.E., D.S.O.

General Sir Charles F. Loewen, G.C.B., K.B.E., D.S.O., A.D.C.

Lieut.-General Sir Cecil S. Sugden, K.C.B., C.B.E.

Lieut.-General Sir William H. Stratton, K.C.B., C.V.O., C.B.E., D.S.O.

Lieut.-General Sir Harold E. Pyman, K.C.B., C.B.E., D.S.O.

Sir Edward W. Playfair, K.C.B.

HONOURS AND AWARDS

The following were included in the New Year Honours List :—

G.C.B.—General Sir Dudley Ward, K.C.B., K.B.E., D.S.O., A.D.C.

K.C.B.—Lieut.-General M. M. A. R. West, C.B., D.S.O.

C.B.—Major-General R. A. Bennett, Q.H.P., M.D., F.R.C.P. (Edin.); Major-General L. F. de V. Carey, C.B.E.; Major-General S. Moore-Coulson, E.R.D.; Major-General R. W. Craddock, C.B.E., D.S.O.; Major-General H. C. W. Eking, C.B.E., D.S.O.; Major-General W. H. Hulton-Harrop, D.S.O.; Major-General L. H. Howard-Jones, C.B.E.; Major-General G. C. Gordon Lennox, C.V.O., D.S.O.; Major-General D. S. S. O'Connor, C.B.E.; Major-General W. F. R. Turner, D.S.O.

C.M.G.—Major-General F. D. Rome, C.B., C.B.E., D.S.O.

K.B.E.—Lieut.-General R. G. Collingwood, C.B., C.B.E., D.S.O.; Major-General O. P. J. Rooney, C.B., C.B.E.

Royal Red Cross, 1st Class.—Colonel Kathleen M. Blair, A.R.R.C., Q^A R.A.N.C.; Lieut.-Colonel Ethel W. R. Warner, A.R.R.C., Q.A.R.A.N.C.

APPOINTMENTS

WAR OFFICE.—Major-General R. N. Anderson, C.B., C.B.E., D.S.O., appointed Vice Adjutant-General (September, 1958).

Major-General C. A. R. Nevill, C.B., C.B.E., D.S.O., appointed President, The Special Board (22nd October, 1958).

Major-General D. A. Kendrew, C.B., C.B.E., D.S.O., appointed Director of Infantry (15th December, 1958).

Major-General E. D. Howard-Vyse, C.B., C.B.E., M.C., appointed Director, Royal Artillery (1st January, 1959).

UNITED KINGDOM.—Brigadier F. C. C. Graham, D.S.O., appointed G.O.C., Highland District and 51st (Highland) Division, T.A., with the temporary rank of Major-General (March, 1959).

Major-General R. G. S. Hobbs, C.B., D.S.O., O.B.E., appointed G.O.C., 1st Division and Salisbury Plain District (April, 1959).

GERMANY.—Major-General R. Delacombe, C.B., C.B.E., D.S.O., appointed G.O.C., Berlin, British Sector (March, 1959).

WASHINGTON.—Brigadier D. W. Price, C.B.E., B.A., appointed Chief of Staff to Chairman, British Joint Services Mission (January, 1959).

BAGHDAD PACT ORGANIZATION.—Major-General C. P. Jones, C.B., C.B.E., M.C., appointed Director, Combined Military Planning Staff (1st January, 1959).

PROMOTIONS

Generals.—Lieut.-Generals to be Generals :—Sir A. James H. Cassels, K.B.E., C.B., D.S.O. (29th November, 1958); Sir Cecil S. Sugden, K.C.B., C.B.E. (29th November, 1958).

Lieut.-General.—Temporary Lieut.-General to be Lieut.-General :—J. H. N. Poett, C.B., D.S.O. (1st November, 1958).

Major-Generals.—Temporary Major-Generals, Brigadiers, or Colonels to be Major-Generals :—J. French, B.A. (13th September, 1958); C. H. Tarver, C.B.E., D.S.O. (16th September, 1958); D. E. B. Talbot, C.B.E., D.S.O., M.C. (29th September, 1958); H. M. Liardet, C.B.E., D.S.O., A.D.C. (6th October, 1958); H. Quinlan, B.D.S., Q.H.D.S. (18th October, 1958); C. G. Lipscomb, D.S.O. (1st November, 1958); J. F. Metcalfe, C.B.E. (7th November, 1958).

Brigadier to be Temporary Major-General :—R. H. L. Wheeler, C.B.E. (1st December, 1958).

RETIREMENTS

The following General Officers have retired :—Lieut.-General Sir Harold Redman, K.C.B., C.B.E. (5th September, 1958); Major-General D. J. Muil, C.B., O.B.E., Q.H.D.S. (18th October, 1958); Major-General L. de M. Thuillier, C.B., O.B.E. (7th November, 1958); General Sir Nevil C. D. Brownjohn, G.B.E., K.C.B., C.M.G., M.C., A.D.C. (29th November, 1958); General Sir George W. E. J. Erskine, G.C.B., K.B.E., D.S.O., A.D.C. (29th November, 1958); Major-General J. R. Cochrane, C.B.E., C.B.E. (2nd January, 1959).

BATTLE HONOURS

The following is the tenth list of Battle Honours approved by The Queen for the 1939–45 War. The Battle Honours selected to be borne on Colours and Appointments are shown in bold print.

THE LANARKSHIRE YEOMANRY, R.A.C., T.A.—*Honorary Distinction* : A Badge of the Royal Regiment of Artillery with year-dates " 1941–45 " and four scrolls : " North-West Europe," " Sicily," " Italy," " Malaya."

1ST/2ND LOTHIAN BORDER HORSE, R.A.C., T.A.—“Somme, 1940,” “Withdrawal to Seine,” “St. Valéry-en-Caux,” “**Falaise**,” “Falaise Road,” “Laison,” “Le Havre,” “**Boulogne, 1944**,” “Calais, 1944,” “Scheldt,” “**Westkapelle**,” “Geilenkirchen,” “Roer,” “Reichswald,” “**North-West Europe, 1940, '44-45**,” “Bou Arada,” “**Kasserine**,” “Thala,” “Fondouk,” “Sidi Ali,” “Bordj,” “Djebel Kournine,” “Tunis,” “**Hammam Lif**,” “Bou Fichta,” “**North Africa, 1942-43**,” “**Cassino II**,” “Liri Valley,” “Monte Piccolo,” “Monte Rotondo,” “Capture of Perugia,” “Arezzo,” “Advance to Florence,” “**Argenta Gap**,” “**Italy, 1944-45**.”

THE SCOTTISH HORSE, R.A.C., T.A.—*Honorary Distinction*: A Badge of the Royal Regiment of Artillery with year-dates “1943-45” and three scrolls: “North-West Europe,” “Sicily,” “Italy.”

WELSH GUARDS.—“Defence of Arras,” “Boulogne, 1940,” “St. Omer-La Bassée,” “Bourguebus Ridge,” “Cagny,” “Mont Pincon,” “Brussels,” “Hechtel,” “Nederrijn,” “Rhineland,” “Lingen,” “North-West Europe, 1940, '44-45,” “Fondouk,” “Djebel el Rhorab,” “Tunis,” “**Hammam Lif**,” “North Africa, 1943,” “Monte Ornito,” “Liri Valley,” “Monte Piccolo,” “Capture of Perugia,” “Arezzo,” “Advance to Florence,” “Gothic Line,” “**Battaglia**,” “Italy, 1944-45.”

THE WELCH REGIMENT.—“**Falaise**,” “Lower Maas,” “Reichswald,” “North-West Europe, 1944-45,” “Benghazi,” “North Africa, 1940-42,” “Sicily, 1943,” “Coriano,” “Croce,” “Rimini Line,” “Ceriano Ridge,” “Argenta Gap,” “**Italy, 1943-45**,” “Crete,” “Canea,” “Withdrawal to Sphakia,” “Middle East, 1941,” “Kyaukmyaung Bridgehead,” “Maymyo,” “Rangoon Road,” “**Sittang, 1945**,” “Burma, 1944-45.”

THE BLACK WATCH (ROYAL HIGHLAND REGIMENT).—“Defence of Arras,” “Ypres-Comines Canal,” “Dunkirk, 1940,” “Somme, 1940,” “St. Valéry-en-Caux,” “Saar,” “Breville,” “Odon,” “Fontenay le Pesnil,” “Defence of Rauray,” “Caen,” “Falaise,” “**Falaise Road**,” “La Vie Crossing,” “Le Havre,” “Lower Maas,” “Venlo Pocket,” “Ourthe,” “Rhineland,” “Reichswald,” “Goch,” “**Rhine**,” “North-West Europe, 1940, '44-45,” “Barkasan,” “British Somaliland, 1940,” “**Tobruk, 1941**,” “Tobruk Sortie,” “**El Alamein**,” “Advance on Tripoli,” “Medenine,” “Zemlet el Lebene,” “Mareth,” “**Akarit**,” “Wadi Akarit East,” “Djebel Roumana,” “Medjez Plain,” “Si Mediene,” “**Tunis**,” “North Africa, 1941-43,” “Landing in Sicily,” “Vizzini,” “Sferro,” “Gerbini,” “Adrano,” “Sferro Hills,” “**Sicily, 1943**,” “**Cassino II**,” “Liri Valley,” “Advance to Florence,” “Monte Scarlari,” “Casa Fortis,” “Rimini Line,” “Casa Fabbri Ridge,” “Savio Bridgehead,” “Italy, 1944-45,” “Athens,” “Greece, 1944-45,” “**Crete**,” “Heraklion,” “Middle East, 1941,” “Chindits, 1944,” “**Burma, 1944**.”

THE ESSEX REGIMENT.—“St. Omer-La Bassée,” “Tilly sur Seules,” “Le Havre,” “Antwerp-Turnhout Canal,” “Scheldt,” “Zetten,” “Arnhem, 1945,” “**North-West Europe, 1940, '44-45**,” “Abyssinia, 1940,” “Falluja,” “Baghdad, 1941,” “Iraq, 1941,” “Palmyra,” “Syria, 1941,” “**Tobruk, 1941**,” “Belhamed,” “Mersa Matruh,” “**Defence of Alamein Line**,” “Deir el Shein,” “Ruweisat,” “Ruweisat Ridge,” “El Alamein,” “Matmata Hills,” “Akarit,” “**Enfidaville**,” “Djebel Garci,” “Tunis,” “Ragoubet Souissi,” “North Africa, 1941-43,” “Trigno,” “**Sangro**,” “**Villa Grande**,” “**Cassino I**,” “Castle Hill,” “Hangman's Hill,” “Italy, 1943-44,” “Athens,” “Greece, 1944-45,” “Kohima,” “**Chindits, 1944**,” “Burma, 1943-45.”

THE MIDDLESEX REGIMENT (DUKE OF CAMBRIDGE'S OWN).—“Dyle,” “Defence of Escourt,” “Ypres-Comines Canal,” “**Dunkirk, 1940**,” “**Normandy Landing**,” “Cambes,” “Breville,” “Odon,” “Caen,” “Orne,” “Hill 112,” “Bourguebus Ridge,” “Troarn,” “**Mont Pincon**,” “Falaise,” “Seine, 1944,” “Nederrijn,” “Le Havre,” “Lower Maas,” “Venrai,” “Meijel,” “Geilenkirchen,” “Venlo Pocket,” “Rhineland,” “Reichswald,” “Goch,” “**Rhine**,” “Lingen,” “Brinkum,” “Bremen,” “North-West Europe, 1940, '44-45,” “**El Alamein**,” “Advance on Tripoli,” “Mareth,” “**Akarit**,”

"Djebel Roumana," "North Africa, 1942-43," "Francofonte," "Sferro," "Sferro Hills," "Sicily, 1943," "Anzio," "Carroceto," "Gothic Line," "Monte Grande," "Italy, 1944-45," "Hong Kong," "South-East Asia, 1941."

THE DURHAM LIGHT INFANTRY.—"Dyle," "Arras counter attack," "St. Omer-La Bassée," "Dunkirk, 1940," "Villers Bocage," "Tilly sur Seules," "Defence of Rauray," "St. Pierre La Vielle," "Gheel," "Rhoer," "Ibbenburen," "North-West Europe, 1940, '44-45," "Syria, 1941," "Halfaya, 1941," "Tobruk, 1941," "Relief of Tobruk," "Gazala," "Gabr el Fachri," "Zt el Mrasses," "Mersa Matruh," "Point 174," "El Alamein," "Mareth," "Sedjenane I," "El Kourzia," "North Africa, 1940-43," "Landing in Sicily," "Solarino," "Primosole Bridge," "Sicily, 1943," "Salerno," "Vulturno Crossing," "Teano," "Monte Camino," "Monte Tuga," "Gothic Line," "Gemmano Ridge," "Cosina Canal Crossing," "Pergola Ridge," "Cesena," "Sillaro Crossing," "Italy, 1943-45," "Athens," "Greece, 1944-45," "Cos," "Middle East, 1943," "Malta, 1942," "Donbaik," "Kohima," "Mandalay," "Burma, 1943-45."

THE MALAY REGIMENT.—"Singapore Island," "Malaya, 1941-42."

BATTLE HONOURS FOR AMALGAMATED REGIMENTS

Instead of carrying ten battle honours on their Standards, Guidons, and Colours for the 1914-18 War, and ten for the 1939-45 War, the regiments amalgamated during 1958-62 will now be able to carry a maximum of twenty for each. These honours must have been previously carried by one or other of the two linked regiments.

The new rule, which appears in Army Orders for November, 1958, also applies, though only of course in respect of the 1914-18 War, to the Cavalry regiments amalgamated in 1922.

All Battle Honours of amalgamating regiments will be merged and shown in the Army List in chronological order by theatres of war. Only the selected Honours—those shown in heavy type in the Army List—will be allowed to be emblazoned on the Colours.

COMMANDER-IN-CHIEF, UNITED KINGDOM LAND FORCES

The War Office has announced that as from 16th January, 1959, the duties of C.-in-C., United Kingdom Land Forces, were transferred to the G.O.C.-in-C., Eastern Command, who on appropriate occasions will be styled C.-in-C. (Designate), U.K. Land Forces. Headquarters, U.K.L.F., will disband by 20th March, 1959, and their duties will devolve upon Headquarters, Eastern Command, from that date.

BREVET PROMOTION TO LIEUT.-COLONEL

The names of 26 majors who have been promoted to the rank of brevet Lieut.-Colonel with effect from 1st July, 1958, were published on 24th October in the Supplement to *The London Gazette* of 21st October, 1958.

ROYAL TITLE FOR GURKHA RIFLES

H.M. The Queen has been graciously pleased to approve that as from 1st January, 1959, the 6th Gurkha Rifles and the 7th Gurkha Rifles shall be designated, respectively, 6th Queen Elizabeth's Own Gurkha Rifles and 7th Duke of Edinburgh's Own Gurkha Rifles.

The 6th Gurkha Rifles and 7th Gurkha Rifles have been granted the honour of a Royal title in recognition of their magnificent war records, and, more particularly, nearly eight years of continuous operations in the Malayan jungle since 1939-45, as well as their unique association with the British Crown.

The titles of the four infantry regiments of the Brigade of Gurkhas will now be: 2nd King Edward VII's Own Gurkha Rifles (The Sirmoor Rifles); 6th Queen Elizabeth's Own Gurkha Rifles; 7th Duke of Edinburgh's Own Gurkha Rifles; 10th Princess Mary's Own Gurkha Rifles.

DISBANDMENT OF THE MOBILE DEFENCE CORPS

It was announced on 3rd December that the Mobile Defence Corps, formed in 1955 as part of the Army Emergency Reserve, is to be disbanded at the end of February, 1959. Mr. Christopher Soames, Secretary of State for War, said that with the ending of part-time training for National Service men and the prospective end of National Service itself, it had become clear that a Mobile Defence Corps consisting solely of volunteers would not be able to carry out its task.

Artillery and infantry units of the Territorial Army would be given advanced training in civil defence techniques to enable them to give the essential assistance to civil defence. One year's camp in every four, starting in 1959, would be set aside for the purpose. These duties would be additional to the present fighting role of the T.A. units concerned.

SCHOLARSHIPS FOR ENTRY TO THE R.M.A., SANDHURST

On 7th January the War Office announced the introduction of scholarships to the R.M. Academy, Sandhurst, for boys who intend to make the Army their career.

Competitions for the scholarships will be held twice a year—in March and July. Those taking part will be examined first by a Command Board—with written tests in English, mathematics, a general paper, and an interview. For final selection the boys will be interviewed by a War Office Board.

Up to 20 scholarships will be awarded at each competition, and each will carry a maximum tax-free award of £200 a year (which represents a refund of tuition fees up to £100 a year, and a maintenance grant of up to £100, the latter being dependent on the parents' income).

As candidates for the examination will be only 15 or 16 years of age, the parents of a successful boy who enters Sandhurst at the normal age of 18 will have the benefit of the award for their son's last year or two at school. The first competition is expected to take place in March, 1959, and the first awards to start in September.

SHORT SERVICE COMMISSIONS

It was announced by the War Office on 7th January that a three-year Short Service Commission is being started which will enable a young man over 18 and under 24 (or 25 in the case of university graduates) to become an officer without any previous service in the ranks except as an officer cadet.

An aspirant should first apply in writing to the Under-Secretary of State for War at the War Office. He will then be interviewed as a civilian by W.O.S.B. and, if successful, posted to the Mons Officer Cadet School for a maximum of 22 weeks' training.

From the time he starts at Mons he will be given officer cadet status and paid the usual 12s. a day. On completing his training successfully he will be granted a Short Service Commission for three years, less the time already spent at Mons. After six months as an officer he will have the opportunity of applying for a Regular commission, and can also at any time apply for an extension of his Short Service term. There is no compulsory Reserve service for those who enter the Army by this method.

CANADA

FOURTH REGULAR ARMoured REGIMENT

The fourth armoured regiment of the Canadian Regular Army was formed at Petawawa on 19th November. This new regiment named The 1st Fort Garry Horse, the name of one of Canada's famous militia regiments, will be based at Petawawa. Armoured support has thus been provided for each of Canada's four brigade groups, the other Regular armoured regiments being the Royal Canadian Dragoons now in Germany, Lord Strathcona's Horse at Calgary, and the 1st/8th Canadian Hussars (Princess Louise's) at Camp Gagetown.

AUSTRALIA**HONOURS AND AWARDS**

The following was included in the New Year Honours List :—

K.B.E.—Lieut.-General A. R. Garrett, C.B., C.B.E.

WEST INDIES**WEST INDIA REGIMENT RECONSTITUTED**

The Jamaica Regiment, maintained by the Federal Government since 1st April, 1958, ceased to exist on 31st December and is being replaced by a reconstituted West India Regiment as from 1st January. The annual cost will be found by the Federal Government.

FOREIGN**CHINA****NEW ARMY CHIEF OF STAFF**

On 12th October, it was announced in Peking that General Huang Ke-cheng had been appointed Chief of General Staff of the Army vice General Su-yu. General Huang Ke-cheng had been Vice-Minister of National Defence since 1954.

AIR NOTES

H.M. THE QUEEN

At R.A.F. Cottesmore on 21st October, 1958, No. 10 Squadron, the first Victor unit, received its Standard from H.R.H. Princess Margaret.

Air Commodore G. H. Morley, O.B.E., has been appointed Honorary Surgeon to H.M. The Queen with effect from September, 1958, in succession to Air Commodore D. A. Wilson, C.B.E., A.F.C., on the latter's retirement from the Service.

HONOURS AND AWARDS

The following were included in the New Year Honours List:—

G.C.B.—Air Chief Marshal Sir George H. Mills, K.C.B., D.F.C., A.D.C.

K.C.B.—Acting Air Marshal William M. L. MacDonald, C.B., C.B.E., D.F.C.; Air Vice-Marshal Walter H. Merton, C.B., O.B.E.

C.B.—Acting Air Vice-Marshal G. Silyn-Roberts, C.B.E., A.F.C., M.Sc., F.R.Ae.S.; Air Commodore R. H. E. Emson, C.B.E., A.F.C.; Air Commodore W. D. J. Michie; Air Vice-Marshal H. P. Fraser, C.B., C.B.E., A.F.C., to be Director of R.A.F. Exercise Planning from 1st January, 1959; Air Commodore H. H. Chapman, C.B., C.B.E., as Director-General of Technical Services, with the acting rank of Air Vice-Marshal, from 1st October, 1958; The Reverend F. W. Cocks, M.A., to be Chaplain-in-Chief to the Royal Air Force, April, 1959.

K.B.E.—Air Marshal Harold D. Jackman, C.B., C.B.E.; Acting Air Marshal Charles E. Chilton, C.B., C.B.E.

APPOINTMENTS

AIR MINISTRY.—Air Marshal Sir Hubert L. Patch, K.C.B., C.B.E., to be Air Member for Personnel from 1st April, 1959; Air Vice-Marshal W. P. G. Pretty, C.B., C.B.E., to be Director-General of Organization from 7th October, 1958; Air Vice-Marshal J. Worrall, D.F.C., as Assistant Chief of the Air Staff (Training) from 30th October, 1958; Air Vice-Marshal H. P. Fraser, C.B., C.B.E., A.F.C., to be Director of R.A.F. Exercise Planning from 1st January, 1959; Air Commodore H. H. Chapman, C.B., C.B.E., as Director-General of Technical Services, with the acting rank of Air Vice-Marshal, from 1st October, 1958; The Reverend F. W. Cocks, M.A., to be Chaplain-in-Chief to the Royal Air Force, April, 1959.

FIGHTER COMMAND.—Air Commodore J. R. A. Embling, C.B.E., D.S.O., to be Air Officer Commanding, No. 12 Group, with the acting rank of Air Vice-Marshal; Air Vice-Marshal R. B. Lees, C.B., C.B.E., D.F.C., as Senior Air Staff Officer from 10th October, 1958; Air Commodore C. M. Stewart, C.B.E., as Chief Electronics Officer from 1st December, 1958.

FLYING TRAINING COMMAND.—Air Marshal Sir Hugh A. Constantine, K.B.E., C.B., D.S.O., to be Air Officer Commanding-in-Chief from 1st March, 1959; Air Commodore C. Scragg, C.B.E., A.F.C., as Air Officer Commanding, No. 23 (Training) Group from 1st December, 1958; Air Vice-Marshal J. F. Hobler, C.B., C.B.E., as Air Officer Commanding, No. 25 (Training) Group from 15th October, 1958; Air Vice-Marshal H. R. Graham, C.B., C.B.E., D.S.O., D.F.C., as Air Officer in Charge of Administration from 1st December, 1958.

MIDDLE EAST AIR FORCE.—Air Vice-Marshal W. M. L. MacDonald, C.B., C.B.E., D.F.C., as Commander-in-Chief, Headquarters, Middle East Air Force, with the acting rank of Air Marshal, from 26th November, 1958.

FAR EAST AIR FORCE.—Air Vice-Marshal E. M. F. Grundy, O.B.E., as Air Officer in Charge of Administration from 1st November, 1958.

ROYAL AIR FORCE REGIMENT.—Air Commodore J. H. Harris, C.B., C.B.E., to be Commandant-General from 1st March, 1959, with the acting rank of Air Vice-Marshal.

CANBERRA.—Air Commodore F. S. Stapleton, D.S.O., D.F.C., to be head of the Joint Services Liaison Staff in February, 1959, with the acting rank of Air Vice-Marshal.

PROMOTIONS

Air Marshal Sir Theodore N. McEvoy, K.C.B., C.B.E., is promoted to the rank of Air Chief Marshal from 1st November, 1958.

The following took effect from 1st January, 1959 :—

General Duties Branch

Air Vice-Marshal to Air Marshal.—W. H. Merton, C.B., O.B.E.

Air Commodore to Air Vice-Marshal.—D. J. P. Lee, C.B., C.B.E.; J. G. Davis, C.B.E., M.A. (Acting Air Vice-Marshal); B. K. Burnett, D.F.C., A.F.C.

Group Captain to Air Commodore.—J. F. Roulston, C.B.E., D.S.O., D.F.C. (Acting Air Commodore); R. C. Ayling, O.B.E. (Acting Air Commodore); T. W. Piper, C.B.E., A.F.C. (Acting Air Commodore); H. E. C. Boxer, O.B.E., D.F.C.; P. T. Philpott, C.B.E. (Acting Air Commodore); T. B. de la P. Beresford, D.S.O., D.F.C. (Acting Air Commodore); F. E. Rosier, C.B.E., D.S.O., A.D.C. (Acting Air Commodore); A. A. Case, C.B.E.

Wing Commander to Group Captain.—D. F. Dennis, D.S.O., D.F.C.; J. R. Armistead, D.F.C.; G. F. Lerwill, D.F.C.; J. Ellis, O.B.E., D.F.C.; J. E. Preston, A.F.C.; G. B. Warner, D.F.C., A.F.C.; C. V. Winn, D.S.O., O.B.E., D.F.C.; A. M. Ruston, D.F.C.; E. H. Lynch-Blosse, O.B.E.; J. B. Wray, D.F.C.; P. Norton-Smith, D.F.C., A.F.C.; E. P. Wells, D.S.O., D.F.C.; A. H. W. Ball, D.S.O., D.F.C.; N. M. Maynard, D.F.C., A.F.C.; C. P. N. Newman, O.B.E., D.F.C.; E. J. F. Odoire, D.F.C., A.F.C.; J. T. Shaw, D.S.O., D.F.C., A.F.C.; I. S. Smith, O.B.E., D.F.C.; C. D. North-Lewis, D.S.O., D.F.C.; P. M. Brothers, D.S.O., D.F.C.; F. B. Sutton, D.F.C.; H. A. C. Bird-Wilson, D.S.O., D.F.C., A.F.C.; J. F. Davis, O.B.E., D.F.C., A.F.C.

Technical Branch

Air Commodore to Air Vice-Marshal.—G. Silyn-Roberts, C.B.E., A.F.C., M.Sc., F.R.Ae.S. (Acting Air Vice-Marshal).

Group Captain to Air Commodore.—C. C. Morton, C.B.E., A.I.E.E. (Acting Air Commodore); B. Ball, C.B.E., B.A. (Acting Air Commodore); H. G. Leonard-Williams, C.B.E. (Acting Air Commodore).

Wing Commander to Group Captain.—M. L. Gaine, D.S.O., A.F.C., A.F.R.Ae.S.; J. T. Arklay, B.Sc.; J. L. Davey; R. C. Fordham, O.B.E., A.F.R.Ae.S.; C. K. Street, M.B.E.; J. A. R. M. Reid.

Equipment Branch

Group Captain to Air Commodore.—C. J. Salmon, O.B.E.

Wing Commander to Group Captain.—S. J. Bryant; S. J. Popham-Pursey, O.B.E.

Secretarial Branch

Wing Commander to Group Captain.—A. R. Pruddah; R. J. Walker, D.S.O.

Royal Air Force Regiment

Wing Commander to Group Captain.—R. J. H. de Brett.

Medical Branch

Group Captain to Air Commodore.—J. B. Wallace, O.B.E., M.D., Ch.B. (Acting Air Commodore).

Wing Commander to Group Captain.—J. St. C. Polson, M.B., Ch.B., D.P.H.; R. O. Yerbury, M.B., B.S. (Lond.), M.R.C.S., L.R.C.P., D.P.H.; J. S. Howitt, A.F.C., M.R.C.S., L.R.C.P.

Dental Branch

Wing Commander to Group Captain.—W. A. H. Smith, B.D.S., L.D.S.

Provost Branch

Wing Commander to Group Captain.—C. S. Hartley.

RETIREMENTS

Air Commodore J. Mutch, C.B.E., M.I.Mech.E. (1st October, 1958); Air Commodore D. A. Wilson, C.B.E., A.F.C., M.R.C.S., L.R.C.P., F.F.R., D.M.R.E., D.M.R., Q.H.S. (3rd September, 1958); Air Commodore W. S. Hebden (3rd October, 1958); Air Commodore G. J. C. Paul, C.B., D.F.C. (6th October, 1958); Air Vice-Marshal Sir George Harvey, K.B.E., C.B., D.F.C. (29th October, 1958); Air Vice-Marshal L. W. Cannon, C.B., C.B.E. (4th November, 1958); Air Commodore L. Taylor, C.B.E. (17th September, 1958); Air Commodore C. E. Hartley, C.B.E., M.Inst.T. (26th November, 1958); Air Commodore F. J. A. Tanner (1st December, 1958); Air Vice-Marshal S. R. Ubee, C.B., A.F.C. (26th November, 1958); Air Commodore C. A. Bell, B.A. (29th November, 1958).

OPERATIONS

CYPRUS.—Now entering its third year of operations in Cyprus, No. 284 (Helicopter) Squadron has crowded a great volume of activity into its life. During its two years of active service the squadron has pioneered two techniques—night-flying and the dropping of troops in mountainous terrain.

AMMAN.—With the withdrawal of British parachute troops and the six Hunters of No. 208 Squadron from Amman, some details of the original air lift have been released. Within 48 hours of leaving the United Kingdom, Hastings and Beverleys of Transport Command were engaged in lifting from Nicosia to Amman more than 3,000 men, 629 vehicles and trailers, and some 5,210,000 lb. of freight and fuel. A considerable portion of this, which included the move of No. 208 Squadron, was transported to Amman within the first 24 hours, and thereafter a regular re-supply service was maintained.

TRAINING

EXERCISE "SUNBEAM."—The year's major United Kingdom air-defence exercise took place between 16th and 20th October. The aim of the exercise was to practise the U.K. defence system under conditions expected in the early stages of a nuclear war. The exercise was directed by the A.O.C.-in-C., Fighter Command, Air Chief Marshal Sir Thomas G. Pike, and raiding aircraft were provided by Bomber and Flying Training Commands, the Fleet Air Arm, the U.S.A.F. based in the United Kingdom, the Belgian and Netherlands Air Forces, and the 2nd and 4th Allied Tactical Air Forces. Types taking part included Valiant, Victor, Canberra, Javelin, Hunter, CF-100, B-47, B-66, F-84, F-86, and F-100.

After the exercise the Air Ministry said that provisional assessments indicated that encouraging progress had been achieved during the past year. The percentage of successful interceptions of 'enemy' bombers had increased notably since last year's test.

Fighter pilots reported that the R.A.F. V-bombers presented the most difficult targets to intercept. During the exercise about 3,500 'enemy' sorties were flown against the United Kingdom in 10 phases. On the last day the effects of operating under simulated radioactive fall-out were tested. Three thousand men and women of the Royal Observer Corps took part and for the first time a detachment of the corps was on duty in the Fighter Command operations room to record the movement of radioactive fall-out.

EXERCISE "ROYAL FLUSH THREE."—Sponsored by Allied Air Forces Central Europe (AIRCENT), the third annual reconnaissance competition between the two Allied Tactical Air Forces was won by the combined R.A.F./Belgian/Netherlands

reconnaissance teams from 2nd A.T.A.F. They beat the 4th A.T.A.F., consisting of American and French teams, by 11,916 points to 11,218. The top award, the Gruenther Trophy, was presented in person by General A. M. Gruenther, former Supreme Allied Commander, Europe, at a ceremony at Spandaghem, after the exercise. The two trophies for the high- and low-level sections of the competition were presented by the Commander, AIRCENT, Air Chief Marshal Sir George H. Mills.

In the high-level section, the English Electric trophy for the highest-scoring missions went to the R.A.F. Canberra team from No. 31 P.R. Squadron and one from No. 17 Squadron. Individual honours in the low-level section went to the French Air Force, operating RF84Fs.

MATERIEL

CANBERRA REPLACEMENT.—The Air Ministry's decision to go ahead with the new strike-reconnaissance aircraft to replace the Canberra twin-jet bomber was announced by the Secretary of State for Air on 17th December, 1958. The new type, which will be capable of the supersonic speed needed to penetrate strong defences, will be a tactical aircraft, so that its proposed development does not imply a reversal of the Government's decision not to proceed with a long-range supersonic bomber for the R.A.F. It will be capable of identifying and attacking any target in all weathers and of carrying any type of weapon, including nuclear bombs. Its ability to operate from small airfields will give it the flexibility required for service in any theatre; it will not be restricted to bases with long runways.

The Canberra, particularly the later versions, will be able to perform useful operational roles until well into the 1960's. The new aircraft, to be known as the TSR2, will be developed jointly by Vickers-Armstrongs and the English Electric Company. Its engine is to be provided by Bristol-Siddeley Engines.

NEW VERTICAL TAKE-OFF FIGHTER.—Sir Roy Dobson, managing director of the Hawker Siddeley Group, announced on 19th December a new aircraft which is under development at the Hawker factory at Kingston-on-Thames. The aircraft is described as a "close-support fighter with vertical take-off capacity which will do all that the Hunter can do." It will be powered by a special Bristol engine. The R.A.F. is said to be interested in the new fighter, which is designed by Sir Sydney Camm, designer of a long line of fighters, including the Hunter and the earlier Battle of Britain Hurricane.

MILITARY VERSION OF THE BRITANNIA.—The first of a fleet of Britannia 253 military transport aircraft for the R.A.F. made its maiden flight on 29th December. The new version is designed to operate as a troop carrier, freighter, or air ambulance, or to combine any of the three roles. Twenty have been ordered for Transport Command. The Britannia 253 can carry some 16 tons over a distance of 4,100 miles at 400 m.p.h., and it has been fitted to give airline comfort for the 115 troops it will be able to transport on long overseas flights.

ORGANIZATION

THE END OF HOME COMMAND.—Within the present financial year R.A.F. Home Command and its two remaining group headquarters are to be abolished. The control of the Air Training Corps and the R.A.F. section of the Combined Cadet Force will pass to Flying Training Command, and the A.O.C.-in-C. of this Command will assume the additional title of Commandant of the A.T.C. Because of the importance of the two cadet forces an Air Commodore is to be appointed as full-time Deputy Commandant. It is estimated that this reorganization will save about 670 Service and 300 civilian posts, amounting to a long-term saving of more than £750,000 a year.

THE NEW SIGNALS COMMAND.—With the increase in flexibility and mobility of the R.A.F. the demands for ever better communications, navigational aids, and radar have emphasized the growing importance of No. 90 Signals Group, and it has been decided that the status of its Headquarters is to be raised to Command level. In future the formation is to be known as Signals Command. There is to be no upgrading of posts

or increase in establishments with the change of title. The present Air Officer Commanding, Air Vice-Marshal L. Dalton-Morris, C.B., C.B.E., is continuing in command of the formation. The headquarters of Signals Command is at Medmenham.

NEW ROLE FOR PIONEER SQUADRON.—The Royal Air Force's only Pioneer squadron in the United Kingdom, No. 230, is to undertake a new role—that of supply dropping. Recently the unit's aircraft have been modified at Prestwick by their manufacturers, Scottish Aviation, so that containers or packages (either with or without parachutes) can be safely pushed out through the space left when the door is removed. This additional function will involve special training for the pilots of the squadron.

MISCELLANEOUS

TRENCHARD MEMORIAL.—Moving that "the House should consider an Address to the Queen for a public monument to the memory of the late Marshal of the Royal Air Force Viscount Trenchard," the Prime Minister said in the House of Commons on 30th October that the nation owed the R.A.F. a debt beyond all measure; but in recalling this it should remember the man whom the Service regarded as father and founder. The impress of Lord Trenchard's personality and the stamp of his mind were still to be found in every branch and department of the Service. The motion, which was supported by the leaders of the Labour and Liberal parties, was carried *nemine contradicente*.

NORWEGIAN CAMPAIGN COMMEMORATED.—A permanent reminder of the Royal Air Force's part in the Norwegian campaign of 1940 is now displayed at the Royal Norwegian Air Force station at Bardufoss. It was from this airfield within the Arctic Circle that two R.A.F. fighter squadrons—one of Gladiators and one of Hurricanes—fought their last battles in June, 1940, before overwhelming enemy strength forced the remnants of the British forces to evacuate. The R.A.F. operations are commemorated at Bardufoss by wall plaque reproductions of the badges of the two squadrons—No. 263 (Gladiators) and No. 46 (Hurricanes). The plaques were handed to Lieut.-General B. F. Motzfeldt, Commander-in-Chief, Royal Norwegian Air Force, by Air Chief Marshal Sir Thomas Pike, A.O.C.-in-C. Fighter Command, during a recent visit by the Norwegian C.-in-C. to the Command Headquarters.

HACK TROPHY AWARD.—For the second consecutive year the Hack Trophy, awarded annually to the best all-round University Air Squadron, has been won, for 1958, by the University of London Air Squadron. Cambridge U.A.S. was second and St. Andrews U.A.S. third.

CANADA

COMMAND CHANGES.—In January this year the R.C.A.F. Air Transport Command assumed command of all Regular force units now within Tactical Air Command. As a result of changing requirements, Tactical Air Command Headquarters in Edmonton disbanded on 1st January. This reorganization within the R.C.A.F., which is in effect a consolidation of the command structure, will result in considerable savings in personnel without any loss of operational effectiveness.

The Queen's Colour and the Colour of the R.C.A.F. were handed over from Tactical Air Command Headquarters, Edmonton, to No. 5 Air Division Headquarters, Vancouver, during a parade and ceremony held on 31st October at R.C.A.F. station Namao, Alberta.

MATERIEL.—The R.C.A.F. is considering the de Havilland Firestreak air-to-air missile as a replacement for the Douglas Sparrow II missile whose production was formally cancelled several weeks ago. Purchase of the Firestreak depends on the Canadian Government's ultimate decision as to whether fighter planes are to be dropped from Canada's air defence system.

—AUSTRALIA

HONOURS AND AWARDS.—In the *London Gazette* for 9th December a Special Malayan Honours List for distinguished service included the following:

C.B.—Air Vice-Marshal V. E. Hancock, C.B.E., D.F.C., R.A.A.F., Air Officer Commanding No. 224 Group, Malaya.

AUSTRALIAN ARMY FLYING.—Moves for the formation of a flying wing of the Australian Army are understood to have made considerable progress. Support for independent control of its aviation requirements, at present looked after by the R.A.A.F., has been gaining weight steadily in Australian Army circles since 1950. The Service requires a Wing of light aircraft, and later helicopters, for staff transport and limited troop movements, casualty evacuation, reconnaissance, and the movement of stores and equipment. The project has met with strong opposition in some quarters on the grounds that it would be an added burden to an already restricted Australian military flying budget. The most likely outcome of this problem seems to be a defence policy giving the Australian Army complete control of its flying activities, including the purchase and maintenance of aircraft, subject to a gross weight restriction of about 4,000 lb.

WOOMERA EXTENDED.—The Australian Government on 4th December took administrative action to extend the Woomera rocket range to a length of 1,250 miles. The Minister for Supply said the proposed arrangements for the area were similar to those which had operated for 11 years at Woomera. The area would be known as Talgarno.

PAKISTAN AND CEYLON

COMMONWEALTH POSTS.—Two R.A.F. officers have recently taken up appointments with the Pakistan and Ceylon Air Forces. Group Captain C. B. E. Burt-Andrews has become the first Commandant of the new Pakistan Air Force Staff College (to be opened shortly at Drigh Road, Karachi) and Group Captain J. L. Barker has been appointed Commander of the Royal Ceylon Air Force. Both appointments carry the acting rank of Air Commodore.

RHODESIA

R.R.A.F. CANBERRAS.—Eighteen Canberras for the Royal Rhodesian Air Force are to be flown out to Rhodesia from next March onwards by R.R.A.F. crews at present being trained at R.A.F. Bassingbourn. Fifteen of the aircraft will be B.2s and the remainder T.4s. Conversion of three B.2s to trainers is at present being carried out by the English Electric Co., Ltd.

FOREIGN

INDONESIA

SUPPLY OF GANNETS.—Britain is to supply Indonesia with six Gannets, naval aircraft designed for anti-submarine purposes. The export of a further 12 may be authorized later. The Foreign Office on 15th December disclosed that export licences for the six planes were being granted. Indonesia ordered 18 Gannets in 1957 before the civil war broke out. Britain's decision to permit the sale of the first six followed long negotiations and a payment by Indonesia towards the cost of training pilots.

RUSSIA

NEW BOMBER.—A new Russian six-jet delta-wing bomber with intercontinental range, capable of twice the speed of sound, is now going into operational service as a replacement for the subsonic Bison, according to *Jane's All the World's Aircraft*. The new aircraft has been given the N.A.T.O. code-name Boudner.

REVIEWS OF BOOKS

GENERAL

History of the Second World War. The War Against Japan. Volume II. By Major-General S. W. Kirby. (*H.M.S.O.*) 55s.

This is another interesting volume in the United Kingdom series of official histories, dealing with the war in the Far East. Compiled by an inter-Service team of historians working under the general direction of Major-General Kirby, it covers the period up to the end of 1943. The principal campaigns covered are those in Burma, Madagascar, the Arakan, the first Chindit expedition, and the Japanese naval sortie into the Indian Ocean. Four chapters are devoted to a description of the operations in the Pacific, whilst the development of 'India Base' has not been overlooked.

The first half of the book closes with the breaking of the monsoon in May, 1942, by which date the Allied forces had been driven out of Burma, Diego Suarez had been captured, and the Japanese fleet had left the Bay of Bengal never to return. This is a further tale of British unpreparedness, and thus full of lessons. One of some importance relates to the various systems of command tried, and it must not be forgotten that, though an Allied Headquarters was established in 1943 to control events in South East Asia, no similar plan was adopted for the Central or South West Pacific Areas. Thus, though Australian and New Zealand forces were committed, the campaigns conducted in the latter by Admiral Nimitz and General MacArthur were directed from Washington and formed part of an 'American front.' Modern communications make light of immense distances but it is apparent, from the events recorded here, that the enhanced control given to a central authority by such means can, unless used wisely, lead to interference, completely nullifying the plans and actions of the man on the spot.

Whilst one can only admire the courage and tenacity of all those engaged in the long retreat through Burma to Assam, it is noteworthy that, by the end of 1942, the morale of the troops was giving concern to the commanders concerned. The basic reason for this is not hard to seek, but it seems also apparent that the latter, whilst deploring the state of training of their formations, often launched them on operations then beyond their capability. The results can be seen in the Sittang Bridge disaster and in the failure of the Arakan campaign.

The concept of Wingate's first Chindit expedition had no strategic aim and the rigidity of his plan played into the hands of the enemy, but the possibilities of controlled air supply were clearly revealed and this was to change the Japanese plan for the defence of Burma. The difficulties which faced India Command, when confronted with the need for the reorientation and expansion of all communications and other administrative resources from facing north-west to east, affected all planning and the scope of this gigantic task is dealt with in four appendices. After the initial set-backs, the Navy and the R.A.F. were fully engaged in re-equipping and re-deploying their forces, and the story of the part played by each is well told. The account of the high-level planning is one of frustration, revealing the differences of outlook of each of the Allies. The Chinese Generalissimo, Chiang Kai-shek, never easy to deal with, was usually only ready to co-operate on his own terms. The Americans did not wish to become involved in any British plan for the reconquest of Burma or Malaya. With the Japanese naval and air forces already reeling from the defeats related, they regarded Burma as a side-show and were apt to resent the commitment of any force there which might detract from their main thrusts towards the Japanese home islands.

This is a clearly written and well-arranged volume, which should be carefully studied by all those interested in the art of war. The 15 supporting maps are well drawn and well positioned and of the 33 appendices, 22 refer to the Order of Battle of both sides at various stages of the campaigns discussed.

The Memoirs of Field-Marshal the Viscount Montgomery of Alamein, K.G., G.C.B., D.S.O. (Collins.) 35s.

Now that the critics have worked out the (quite irrelevant) question of whether they like Montgomery or not, let it here be said what the reader is getting for his money. He is getting, in the first place, the confessions of a master of the art of war, who bares his soul in public to a degree which at times is almost embarrassing; of a man who has dedicated his life to his profession, has thought deeply and fixedly, experienced widely, and exercised his skill upon a scale such as has fallen to the lot of but a handful of successful commanders in the whole vast range of history. From a young man who "saw little straight and nothing whole," he has made himself into someone who can reduce all complexities to their simplest components and separate the gold of the possible from the dross of the impossible. All, therefore, that such a man has to say, whether deliberately, incidentally, or inferentially, upon the command of armies should be read not only by this but by many generations to come. Every word is pure gold.

Secondly, the reader has before him the history of some of the principal transactions of the late war. In this the mode of relation suffers somewhat from the Field Marshal's defects as an author. Some historians will be advocates, some judges: none will, like Montgomery, be at once advocate, judge, and jury. His judgments command the profoundest respect—they must do. But such a treatment of things will not make for a satisfied reader. Boring he never is; but satisfying, no. He is not helped by his printer, who contrives to make his peculiar style of writing and quoting even more peculiar, nor by his draughtsman, whose productions are neither elegant nor illuminating.

If the defects are inherent, however, so also are the virtues, and I would sooner be run by Montgomery than by any committee.

War and Peace in the Space Age. By Lieut.-General James M. Gavin. (Hutchinson and Co.) 25s.

When General Gavin recently resigned his post as Assistant Chief of Staff for Plans and Operations of the United States Army, it was understood that he did so because he differed seriously from the official policy of the Department of Defence. *War and Peace in the Space Age* now gives us his views on the present and future organization of U.S. defence.

General Gavin has had much experience of airborne military operations, and is an enthusiastic believer in the value and importance of airborne forces. The book is divided into two main parts, the "Decade of Dilemma: 1945-1955," and the "Decade of Decision: 1955-1965." In the first part he sums up the lessons of the second World War and concludes that air power used independently was ineffective. "The true lesson of the airplane in the second World War," he says, "is that, like other forms of mobility, air mobility is most useful when employed to move man and his means of making war to the area of decision, and there to continue to work closely with him."

He believes that during the 'decade of dilemma' the U.S. lost its technological lead to Russia. For this he chiefly blames the Department of Defence which, under U.S. law, was staffed entirely by civilians and was responsible for many wrong decisions.

In the 'decade of decision' General Gavin stresses three main points. First, the free world must find unity of purpose and adopt a less defensive attitude towards world Communism. Next, he urges the provision of land forces capable of supporting this concept. They must be hard-hitting and fully mobile, transported and supplied by air. Thirdly, we must realize that the whole world is now one tactical theatre.

This a challenging and, in some ways, a disturbing book, recommended to all who are interested in the defence of the free world.

On War, Atomic Weapons and Global Diplomacy. By Raymond Aron. (*Secker and Warburg.*) 16s.

"Humanity has entered an unprecedented phase in which the great Powers are, for the first time in history, preparing for a war they do not want to fight. How long can peace be preserved by the threat of a suicidal war? Is it possible to find a way out of the terror stalemate?" These are the burning questions of our times, which M. Aron sets out to examine in this small volume.

Up to 1949 the United States monopoly of the atomic bomb precluded the danger of a third world war, although Russia remained mobilized with conventional arms. Korea and Indo-China showed that limited war was still possible. But the explosion of Russia's first atomic bomb, the subsequent scramble by the Atlantic Alliance to re-arm themselves with conventional weapons, the advent of the hydrogen bomb, and now the race to perfect the inter-continental ballistic missile have created an uneasy balance of power (or terror?) which appears to many people to offer no choice between mutual suicide or an uneasy peace—at any rate so far as the Western powers and the Communist bloc are concerned. Is there no middle course which may eventually lead to world peace?

The author examines all the possibilities. One hope—and the simplest one—lies in disarmament, but here he is pessimistic. Attempts to suspend hydrogen bomb tests have so far failed and are likely to fail in future, he argues, since any agreement to be acceptable to both sides would have to occur at a time of atomic parity, and who is to determine when such parity exists? Now, with the secrecy surrounding I.C.B.M. trials, the problem has become even more intractable.

He then analyses the failure of conventional re-armament by N.A.T.O. and reaches the conclusion that, in their attempt to balance their manpower inferiority by introducing tactical nuclear weapons, the planners of S.H.A.P.E. have resigned themselves "to a situation which the statesmen recognized in 1950 and which they hoped to find a way out of: *for Europe, there is no middle way between peace and annihilation.*" The only strategy is the strategy of the deterrent. He examines the alternative—the so-called policy of 'the graduated deterrent'—but, so far as Europe is concerned, he fails to suggest any practicable means of enforcing such a policy.

Outside Europe he sees a more hopeful prospect in the immediate future, his argument being that so long as the great Powers are threatening one another with total annihilation they will take care, when and if drawn to intercede in local conflicts in Asia or Africa, to ensure that the fire will not spread and lead to a general conflagration. But what of the long-term future? The day will surely come when the atomic weapon will be within reach of the so-called second-class states; then the risk of a local conflict leading to a general war of annihilation will be vastly greater. In the meantime the author can only proffer the hope that since "mankind, for the first time ever, is preparing for a war it does not want to fight" it can look to the common sense of statesmen to avoid it. This being the case one can only hope that for once history will not repeat itself.

This is not an easy book to read, but it certainly stimulates thought on the most urgent and difficult problems of our times.

The Soviet Navy. Edited by Commander M. G. Saunders, R.N. (*Weidenfeld and Nicolson.*) 36s.

"Secrecy and mystery characterise everything. Nothing is made public that is worth knowing. You will find no two individuals agreeing on the strength of the Army and Navy. . . ." So wrote the American Minister in St. Petersburg of Tsarist Russia in 1852. The Soviet regime, especially under Stalin, intensified this characteristic to conceal its own weakness. Little was thus known about its Navy; even *Jane's* was led into flights of fancy about its new construction programmes.

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battleship. The *Sverdlov* 'cat' was let out of the bag. Ships of this class, together with modern destroyers, have since become the hammer and sickle in countries on both sides of the Iron Curtain. And not only have their ships, officers, and men been seen abroad, but more information about their Navy has been published, notably in the recently revived daily newspaper *Sovietshi Flot*, albeit not to the extent that details of the navies of Western nations are released.

It has therefore now become possible to write a reasonably authoritative book about the Soviet Navy. This Commander Saunders has done by inviting 18 experts from many countries to contribute chapters. Russia's maritime past, the Russian Navy's part in the Revolution, and the Soviet Fleet's achievements in the second World War come first. The major part of the book, however, covers the Soviet Navy of today; its materiel and personnel, its strategy, and the implications of Soviet sea power with special reference to the Soviet submarine threat.

Individual contributors are not always factually correct, nor will all their opinions be shared by everyone. But these points do not detract from the value of a stimulating book on whose production Commander Saunders is to be congratulated.

What would be the real strength of the Soviet Navy in war? It has a powerful force of ships, deficient in aircraft-carriers, overwhelming in submarines. The 'guts' of its officers and men are not in doubt. But what of the ability of its flag officers and captains to conduct naval operations? The several wars of the present century do not stand to their credit. But they have, in their recent flag-showing visits, shown unexpected skill in ship handling.

"In a future war the struggle at sea will be of even greater importance than it was in the last war," said Marshal Zhukov in 1956. Certainly we must not under-estimate the Soviet Navy's capacity to sever the Atlantic lifeline. But we should also be on our guard against over-estimating it as we did with the Italian Fleet in the Mediterranean in the thirties. In Admiral Hopwood's words, "The strength of the ship is the Service. . . ." and that, in the case of the Soviet Navy, is to a large extent unknown. Towards its evaluation more books of the calibre of Commander Saunders's work are needed.

This JOURNAL is doubtless studied in Moscow. An assessment of the worth of the book under review by a member of the Soviet Admiralty would be of the greatest interest to all our members. Will they accept this as an invitation to contribute?

The Battle of France, 1940. By Colonel A. Goutard. (*Frederick Muller.*) 25s.

"The fall of France in 1940 changed the course of history—for the worse. Her front collapsed in six days, and her Government surrendered in less than six weeks, from the start of Hitler's attack in the West. As a result of these swift events the war lasted six years and spread over the world—with terrible immediate effects for many millions of people, and far-reaching consequences for Western civilization. So the causes of the catastrophe are a matter of immense interest." Thus writes Captain Liddell Hart in the foreword to this volume.

What were the causes of this catastrophe? The common belief is that the fall of France was due to internal weaknesses fostered by Communism, corruption, and a general decline in the moral fibre of the nation. Certainly the weaknesses of the French body politic were poor soil upon which to nourish the seeds of military victory, but such belief overlooks the fact that the collapse of France started from military and not from political causes. The author's purpose is to examine these causes and to throw a floodlight on the inherent defects of French military doctrine and organization in the second World War. His disclosures are frank, disturbing, and of great historical importance.

Contrary to popular opinion the newly raised German forces and the nation did not enter the war with fervent enthusiasm and high morale. Comparing the situation with 1914, when the German nation entered upon war full of enthusiasm, General Westphal wrote, "When invasion was let loose on Poland, all went forward to meet their fate with

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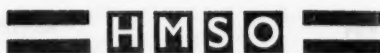
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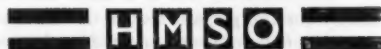
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heavy hearts. Profoundly depressed, millions of men obeyed the mobilization order in silence." Furthermore, half the mobilized army was unfit for war due to lack of training; and deliveries of artillery, aircraft, and tanks were well behind schedule.

Victory in Poland was acquired by employing almost the whole of the hard-core of the German Army and the whole of the Luftwaffe. The Western Front was laid almost bare. But Hitler's gamble paid off, and in the period of respite which followed—the 'phoney' war—Germany set about closing the gaps in her armour. Training and equipping proceeded apace and the lessons of the Polish campaign were absorbed. In France, almost unbelievably, the picture was reversed. The lessons of Poland were ignored. The High Command, harking back to the last war, decried the blitzkrieg tactics and the tactical use of aircraft. Such methods were doomed to failure, they argued, against the linear defence on which they had set their hearts, the solid wall from Switzerland to the sea. More digging, more concrete, and more anti-tank defences were the order of the day. Worse still, training was ignored and no mobile strategic reserve was formed. As one French General has recorded, "Our units were vegetating in a purposeless existence. They settled down to guard duties and killing time until the next leave or relief." Of the French High Command the author reveals an almost incredible picture of generals immersed in paper work, lacking all touch with formations and units, and, when the fighting started, buried in their command posts without effective information or communications.

Such is the background to the major part of this book, which describes the general course of the campaign with particular reference to the crossing of the Meuse by Kleist's armoured group. The author here is on ground which has already been covered by many English writers, though possibly not in such detail regarding the handling and conduct of French formations and units. His object is to drive home the lesson that the responsibility for France's defeat must not be placed on her troops, nor on their equipment, but on her military thinking between the two wars which resulted in a doctrine of paralysis. Here we have the perfect example of an army preparing to win the last war. One is not surprised to learn that when originally published in France (with a preface by General de Gaulle) this book "met with a frigid reception from the military authorities." The truth is often painful.

The Opium War through Chinese Eyes. By Arthur Waley. (*George Allen and Unwin.*) 21s.

The Opium War (First China War, 1840–1842) and the events leading up to it have, until fairly recently, been described almost entirely from Western sources. Chinese archives have now provided the other side of the picture, and among these is the diary of Commissioner Lin, who was sent by the Emperor to Canton in 1839 to put a stop to the opium traffic.

Lin was the most important Chinese official who was concerned with this business and his diary, up to the time of his dismissal in 1841, gives an intimate account of his thoughts and processes, on which Mr. Waley, who is a well-known authority on Chinese literature, has commented as necessary when the actual facts differ from Lin's version.

But to cram 'Commissioner Lin at Canton' into a single chapter—more than half of the whole book—is too much at one bite for a period covering three years out of a total of less than four. The first part of the book could well have been split up with advantage into four separate chapters and periods. As it is, it just runs on and on, without a breathing space or even a year reference at the head of a page, and the reader cannot see the wood for the trees. An index is provided, but the accompanying map is very inadequate, most of the place-names in the text being omitted.

Nevertheless, this is a most interesting and informative book. Although written chiefly for the general reader, it will also fill in some of the blanks for the more serious student of the military and political aspects of this period in the Far East.

Kitchener. Portrait of an Imperialist. By Philip Magnus. (*John Murray.*) 30s.

This is very fine biographical writing and its excellence is not lessened if at the end of it Kitchener's reputation has become, alas, a thing of shreds and patches. But not quite. Before the sad story of his last years at the War Office he had a period in Egypt which seems to have been almost wholly successful. In these surroundings and in the Sudan he was at home. He spoke French and Arabic fluently, he could find the company he liked, and he could get things done without making hay of the machinery of administration. For staff and Government systems which were not his own he had the contempt born of ignorance, and when he could he blew them sky high. This happened when he was Chief of Staff in South Africa and it was the same instinct behind his quarrel with Curzon in India. When, in 1914, he came to the War Office, a place he had studiously avoided throughout his service, he could no longer destroy and improvise. He could dictate; but as there was only the rump of a General Staff to stand up to him or guide him he got into a tangle of overwork and responsibility which would have daunted a far wiser man, and only the tragedy of the *Hampshire* got him out.

But whatever we have come to know of K's shortcomings—and there has been plenty of evidence of them long before this book was written—one thing can never be taken from him. When the call came to a people who knew nothing of real war, he was the rallying leader, the symbol of a nation in arms, and a true prophet of the length and gravity of the struggle. Whatever was known of his failings in Whitehall, he remained to the man in the street a hero to his death. Sir Philip Magnus's book is a revealing character study of a most remarkable man.

A Psychological Warfare Casebook. By William E. Daugherty and Morris Janowitz. (*Johns Hopkins Press.*) £5.

Since Communism became a dominant factor in world politics the leading nations of the world have engaged in a progressive contest to influence the minds of foreign nations and groups in a way designed to sway them towards their own particular ideologies. There is nothing startlingly novel about this concept, which is certainly as old as the early religious missions, but the aims and methods have changed and expanded vastly during the present century. Today such expressions as propaganda, cold war, political warfare, and psychological warfare have become household words in the English language which convey the struggle to influence men's opinions and behaviour in peace and in war. To the British mind there has always been something slightly repulsive about such methods as propaganda, but the American attitude is more open and realistic. This does not imply that in what we prefer to call political warfare we have been any less successful than the Americans have in what they usually call psychological warfare. With typical American thoroughness they have entered the field in a big way during and since the second World War and have built up a complex and—to the reader of this volume—at times somewhat bewildering array of agencies, official and private, devoted to the task of psychological warfare.

The authors of this volume have set themselves the task of collating in a series of articles and essays the works of some 73 experts. They have chosen to adhere to the term psychological warfare, which they define as "the planned use of propaganda and other actions designed to influence the opinions, emotions, attitudes, and behaviour of enemy, neutral, and friendly groups in such a way as to support the accomplishments of national aims and objects." The result is a volume of over 800 closely printed pages with copious annotations. It is in itself a text book, a history, and at the same time a readable account of American efforts in this field since the War of Independence. In addition some space is devoted to Nazi and Soviet propaganda and to Anglo-American co-operation during the last war. The work of Richard Crossman and of Sir Bruce Lockhart come in for unstinted praise.

A detailed analysis of so comprehensive a study is not possible within the scope of a review. Suffice it to say that the authors throughout stress that 'psy-war' is but a means

to an end—be that end political, military, or politico-military, and that without co-ordination at the top level the results may be negative and at times even harmful. The methods employed cover a surprisingly large field from music to magazines, from loudspeakers to love stories.

This volume is an important and interesting introduction to a little-known subject.

Elizabethan England : . . . 'In relation to all Foreign Princes.' Volume XII. 1601-1618. By E. M. Tenison.

Noticing this volume of 635 pages in some few lines, one can hardly do it justice but only touch on three subjects likely to interest R.U.S.I. members. When the Irish campaign of 1601 is elucidated (as thoroughly as was that of 1599 in Volume XI) the importance of the contribution to victory of the Royal Navy under Sir Richard Leveson becomes apparent for the first time. Even after the capitulation of the Spanish expeditionary force at Kinsale, vigilance was not relaxed, either in Ireland by Carew and Mountjoy, or in Spanish waters, where English ships discouraged any renewal of the invasion. Through the material here presented, the reader can experience the Spanish invasion of Ireland from the standpoints of the Irish, the Spaniards, and the English.

The last two-thirds of the volume carry the Jacobean epilogue to 1618, with the execution of Raleigh. King James was in such haste to appease that he disarmed the Merchant Navy more than a year before the Peace Conference met at Somerset House. Although England had the upper hand in the war, this Conference was to produce "a peace more destructive to England than a war," because the English delegates were purchasable by Spain. From Spanish archives we now learn the price of each. In 1924 Professor Callender pointed out the disastrous nature of this Treaty. His indictment, found by some too scathing, seems fully justified now that we can view the shrivelling of

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British sea-power from the Spanish end where it was contrived, albeit with English help. Essex's assessment is amply borne out by the British Ambassador in Madrid, Sir Charles Cornwallis, who reports Spanish opinion "that England never lost such an opportunity of winning Honour and Wealth unto it, as by relinquishing the Warr with Spaine." Cornwallis knew the plight to which Spain had been reduced when she was offered victor's terms by the English peace party.

Raleigh, any more than Burghley or Essex, would never have accepted this surrender in silence. His removal was therefore a prerequisite for the pro-Spanish party. He must be 'tried' and suppressed like Essex. They accused him of being corrupted from Spain, which in fact they were willing to be while he was not. His name is not found among theirs in the Spanish lists of Englishmen amenable to receive secret pensions and jewels. The zeal of those biographers who have loaded Raleigh with the laurels of Essex and Cumberland has not extended to consulting Spanish records to see whether or not he was guilty of taking Spanish bribes. Tenison seems to be the first fully to turn this key to English politics of the day. It appears that Raleigh's defence at his trial and his scaffold speech can be accepted literally. Juxtaposition of the Royal Commission for Raleigh's Guiana voyage with S. R. Gardiner's expressions uncovers the fatuity of the latter.

This volume is as upsetting to our school histories as were its predecessors, a basic difference being the collation of Spanish material. The vitally revealing correspondence of Gondomar (Spanish Ambassador from 1613), though in print in Spain, has until now been ignored in England.

Stalingrad. By Heinz Schröter. (*Michael Joseph.*) 25s.

Doctor at Stalingrad. By Hans Dibold. (*Hutchinson.*) 16s.

Stalingrad, like Singapore, was one of the great tragic episodes of the second World War. But, unlike Singapore, it was a turning point, for it marked the decisive failure of Hitler's campaign against Russia.

In July, 1942, Hitler ordered the 6th Army, under General Paulus, to capture Stalingrad, and the moving story of what followed has been written, clearly and factually, with many quotations from official documents, by Heinz Schröter, a war correspondent with the 6th Army.

Paulus reached the Volga with 330,000 men but soon got into difficulties, and by November the spearheads of the attacking Russians met near Kalatch and the 6th Army was encircled. The situation was serious but not desperate, and there is little doubt that Paulus could, at that time, have broken out of the encirclement without disastrous losses. Hitler, however, had an hysterical fear of losing ground and, with it, prestige. Supported by Goering, Keitel, and Jodl, he opposed withdrawal. He believed that will power—his will power—would alone make everything possible. On the other hand, the Army Chief of Staff, Zeitzler, summed up the responsible military view when he said, "It is a crime to leave the 6th Army where it is. The entire army must inevitably be slaughtered and starved."

On 24th November the Army Group Commander decided to act on his own responsibility and order Paulus to break out. But even as this order was being drafted, Hitler sent a signal directing the 6th Army to concentrate in the Stalingrad area, and promising to ensure its supplies and eventual relief. Paulus held a conference, at which his generals strongly urged that his policy, ignoring Hitler's signal, must be to break out. Paulus, however, listened to his Chief of Staff, who stressed that obedience must be a soldier's true policy.

So the 6th Army held on and the crisis deepened, growing daily more acute. Hopes of air supply soon faded, as less than 20 per cent. of the minimum essential requirements could be flown in, though 45,000 wounded were evacuated on the return flights. In

January, 1943, after a hopeless and bitter struggle, with food, ammunition, and fuel almost exhausted, Paulus asked permission to surrender. Hitler refused, and ordered him to hold his positions to the last round and the last man. On 31st January the heroic remnants of the 6th Army surrendered.

What happened afterwards is told by Hans Dibold, an Austrian doctor who stayed in Stalingrad with the worst of the sick and wounded. Short of food, water, and medical supplies, the doctors did everything they could for those in their care. But it was little enough, and of the 90,000 men captured, no more than 10,000 are still alive today. Dr. Dibold does not attribute to the Russians all the blame for this. Some shortages were beyond their power to remedy, and many men were already dying of starvation and exposure when the surrender came. In particular, the Russian doctors were, on the whole, helpful and sympathetic.

So ends a story of horror and useless sacrifice, illumined by the courage, unselfishness, and devotion to duty of which the human race is always capable in times of disaster.

Frontier Doctor. By Sir Henry Holland. (*Hodder and Stoughton.*) 25s.

The best autobiographers are those who give the reader a true picture of their own personalities, and Sir Henry Holland is no exception. Those who have known him long will recognize the man in every paragraph. He writes as he speaks, clearly and simply, with zest and humour where the subject permits, with deep feeling where his convictions are concerned. His main theme is his work for the Church Missionary Society from 1900 to 1948 in what is now West Pakistan, especially at the Mission's Quetta Hospital in the ruins of which he was buried and nearly killed in the great earthquake of 1935. The story of his escape on that occasion and of the rebuilding of the hospital under his leadership in less than five years is an epic of its kind. So is that of his eye clinic at Shikarpur in Sind, in those days a centre of bigoted Hinduism; thanks entirely to Holland's surgical skill and the enthusiasm inspired by his Christian example, this institution has risen from primitive beginnings to be one of the largest and best-known eye hospitals in the world. But there is plenty in the book for the layman and general reader too. Errands of duty and of mercy took Sir Henry to some of the remotest and least accessible places in the Middle East; to the desert fastnesses of the Kalat State, to forbidden valleys in the Hindu Kush and over the high passes of the Karakoram, to the palace of the King of Afghanistan and the black tents of robber tribesmen on the Perso-Baluch border. His toughness is amazing; the Quetta earthquake was only one of his almost miraculous escapes from death. On one occasion he took 15 grains of cocaine by mistake for trional; on another he swallowed an almost pure culture of cholera bacilli in soda-water at the house of a Baluch chief. One night he nearly stepped on a real cobra under his bed, the next he jumped off a 30-foot roof to escape from an imaginary one which chased him in a nightmare.

Sir Henry's narrative is enlivened throughout by many an amusing or exciting incident and sweetened by the kindness with which he writes of his many helpers, European and Asian. He describes his adventures factually and without exaggeration or the slightest trace of self-glorification; the same applies to his professional and administrative achievements, for which with true Christian humility he thanks the Almighty whose servant and instrument he is. To Henry Holland his book is above all a witness to the power and goodness of God and a record of the ministry of healing in which for nearly half a century he followed in the footsteps of his Master. As such it will be a joy and an encouragement to all who support the missionary endeavour of the Church of Christ. As literature, however, *Frontier Doctor* will have a wider public; it will be read with delight not only by the author's countless friends and admirers, not only by those of us who have spent some of the best years of our lives in what is now the Republic of Pakistan, but by every Briton, young and old, who loves a true story of courage and achievement and is proud of the things his countrymen have done in the remote corners of the earth.

Brassey's Annual: The Armed Forces Year-Book, 1958. Edited by Admiral H. G. Thursfield. (*W. Clowes and Sons.*) 63s.

How often does a librarian receive a request something to the effect, "I have to write a paper on the following subject . . . (it usually takes about six lines to describe). . . . Will you please send me a book dealing shortly and concisely with the subject"? Of course there never is such a book but the librarian might, if the subject is a modern one, do worse than write back, "Go through the last five years of *Brassey*; you'll find plenty there." For the essence of *Brassey* is that every year it contains about 30 articles on subjects which are essentially topical and as up to date in their facts as any annual can be. Here are a few titles taken at random from the 1958 issue: "The Object in War"; "The Modern Relationship of Statesmen and Military Leaders"; "Naval Strategy Today"; "Britain's Future Strategic Reserve"; "Limited War"; "The Arab Shore of the Persian Gulf: Its Political and Military Problems"; "The Future of Air Defence," and so on. The Reference Section includes the important White Papers of the year: the Defence White Paper of 1958 and its accompanying Defence Statistics; Abstracts of the Navy, Army, and Air Estimates with the memoranda of the Secretaries of State; the White Paper on Pay and Allowances and the one on the Central Organization of Defence. Some regard the arrival of *Brassey* as the literary event of the military year, and, as usual, the volume for 1958 is just that.

The Pathans, 550 B.C.-A.D. 1957. By Olaf Caroe. (*Macmillan.*) 60s.

A sense of history, of genuine admiration, a strictly controlled touch of romance and a hint of nostalgia; all these are found in a book which 'had to be written,' and it is a monument to Sir Olaf's service of half a lifetime among a people so many of us have known, and have liked, respected, and hated in turn. The story begins in Old Testament times and one is half-way through the book before the first British traveller, Mountstuart Elphinstone, appears on the scene. He was possibly the greatest of a line which included Mackeson, Nicholson, Edwardes, and Abbott. Only the best could succeed in the problem the Sikhs left us, and the chapter given to these great men could not be left out of any story of the Pakhtuns. There was then a background of provincial rivalry, competing systems, changing policy, and changing governments—the latter on both sides of the undefined frontier—and all this ensured the prolonged truculence and independence of the tribal area. Even when eventually we poured in large garrisons and honeycombed the country with roads, as in Mahsudland, we never succeeded in disarming the people or collecting revenue.

Sir Olaf dispels the well-worn legend of "the hungry Pathan, in his barren hills, looking down on the fertile plains below him. . . ." This needed saying and it is pity it was not said before and often. Far too much romance has been woven into the Pathan story and the men of the frontier lose nothing by excluding it.

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The inevitably dwindling band who experienced the Pathan should be grateful for this book with its fine sense of proportion and gems of descriptive writing. It is adorned with well-chosen illustrations, copious notes to each chapter, genealogical tables, ethnographical and other maps, and a full index. There is a finely worded dedication to Iskander Mirza, lately President of Pakistan.

Behind the Sputniks. By F. J. Krieger. (*Public Affairs Press, Washington, D.C.*) \$6.

This book, a survey of Soviet space science, is not as formidable and highly technical as would appear at first glance. It was prepared as part of the research programme undertaken for the United States Air Force by the Rand Corporation and consists in the main of a series of papers and reports, the majority of which have been translated from the Russian. An introduction by the compiler briefly outlines the development of astronautics in Russia and this history acts as a useful background to the documents which follow. The articles have been selected from a wide field of publications ranging from the technical, through popular science, to newspaper comment. Sections of the book are devoted to flights in outer space, biological factors (including a brief reassurance to the British Society of Happy Dogs), lunar and cosmic projects, and rocket and missile developments. This last section will be of particular interest to the military reader.

The articles are arranged chronologically within their subject groups which, as Mr. Krieger claims, enables the reader to appreciate "the singleness of purpose in the Soviet space flight programme and the Russian techniques for developing the subject in open literature." This reference to open literature should be noted. No classified information has been used, only articles and speeches appearing in scientific magazines or newspapers. There is little doubt that if these had received wider publicity in the West when they were published there would have been less general surprise when the sputnik was launched successfully. The book shows, for example, that there has been a Government-sponsored rocket research programme in the Soviet Union since 1934, and the absorption of German development, skill, and techniques in 1945 only gave this programme an added boost. The Soviet scientists had been making progress for a long while on independent lines and, as early as 1953, the Soviet delegate to the World Peace Council said, "Science has reached a state when it is feasible to create an artificial satellite of the earth." Not many of the articles have been written specifically for non-Russian readers but several of them, noticeably the extracts from *Pravda*, have a semi-political tinge and a reminder that Russian interest in the conquest of space is not academic or disingenuous but harnessed to a ruthless political intention.

The publication of this book is well timed to coincide with the International Geophysical Year, to which many references are made. In addition to the official Soviet Rocket and Earth Satellite Programme for the I.G.Y., it includes articles on observation of the artificial satellite, the scientific value of radio signals, and a great deal of interesting information for amateur radio observers. The final section of the book consists of Tass reports from *Pravda* on the sputnik. These are not very technical and are of considerable general interest. The comprehensive bibliography of almost 350 references which follows the appendices will be of more use to the specialist student. Many libraries are woefully deficient of books written by 'the other side' and this anthology, which has that particular fascination that stems from glimpses of what the opposition is doing and thinking, can be a useful and authoritative addition.

NAVAL

The Vernon Papers. Edited by B. McL. Ranft. (*Navy Records Society.*)

Nelson's Letters to his Wife. Edited by G. P. B. Naish. (*Navy Records Society, and Routledge and Kegan Paul.*) 42s. each.

The Navy Records Society has produced two volumes for 1958—*The Vernon Papers* and *Nelson's Letters to his Wife*.

The Vernon Papers comprise for the most part the bulk of the original MSS. preserved at the National Maritime Museum, which cover the period of command of Admiral Edward Vernon in the West Indies from 1739 to 1742, during the war of 'Jenkin's Ear,' and in the Channel in 1745 at the time of one of the periodical scares of a French invasion. Vernon's attack on Porto Bello in 1739 was an outstanding success; but the subsequent operations against Cartagena, in conjunction with Brigadier-General Wentworth, did not prosper. Wentworth was singularly inept and Vernon was lacking in tact, the result being that no further success was achieved.

Vernon, however, had many good points. As an administrator he was in advance of his times, and his care for the health and welfare of his men is among his more well-known attributes. His chief failing was in a too facile use of the pen and a tendency to quarrel with the Admiralty; his almost daily letters of complaint and the manner in which they were phrased, particularly while holding the Channel Command, did not endear him to his superiors. The final straw was his authorship, which he refused to confirm or deny, of two pamphlets attacking the naval administration, which in 1746 led to his name being struck off the list of Flag Officers.

This is a very informative book, and Mr. Ranft has made a good selection from the mass of material at his disposal, though there is rather too much repetition of some of the routine passages in Vernon's orders to his captains.

Nelson's Letters to his Wife constitutes the 100th volume issued by the Navy Records Society. In view of the wider interest it is likely to have, it had also been printed as a separate edition by Messrs. Routledge and Kegan Paul. Each chapter covers a definite period and has a comprehensive editorial introduction. The last chapter—*Love lies Bleeding*—takes the reader up to 1831, in the May of which year Lady Nelson died.

Several biographies of Nelson have been written in the past, but these have been concerned more with his public life than with his private life. Thanks to the industry of Mr. Naish, the reader now has a reliable series of the private letters from Nelson to his wife. Unfortunately, comparatively few of the letters to Nelson from his wife have been preserved, but we have a selection of Service letters both to and from Nelson, which illustrate the trend of the principal events in his career up to the parting of the ways in 1801.

Although Nelson was genuinely attached to his wife until, at any rate, Lady Hamilton appeared on the scene, it is evident that their temperaments were inimical. Nelson was a vain man and no flattery was too excessive for him. Fanny, on the other hand, preferred the quiet life and found herself out of conceit with the fashionable world of London society. There were faults on both sides, but the editor here comes down on the side of Lady Nelson.

This is an excellent book, and Mr. Naish is to be congratulated on his able presentation of those facets in the private lives of Nelson and his wife which have sometimes been distorted by earlier editors.

The Divine Wind. By Rikihei Inoguchi, Tadashi Nakajima, and Roger Pineau (*United States Naval Institute.*) \$4.50.

As a member of the Japanese Kamikaze Corps, Hamlet would have found plenty to think about and to say; but not so his fellow pilots of suicide planes who accepted the situation with astonishing calm. This book sets out to describe the Kamikaze operations of the Japanese Navy in the latter stages of the war in the Far East. The underlying causes are revealed in a sober objective mood, and occasional lapses into sentimentality give the reader further insight into the Japanese character. The reason for adopting such tactics are made clear by the co-authors, a United States Reserve officer and two ex-Japanese naval officers who were concerned with mounting Kamikaze attacks, and who are interested in tactics rather than the strategic background of this stage of the war. A desperate situation called for desperate measures.

For the reader interested in the Kamikaze operations the book provides an apparently authentic, if at times somewhat rambling account; the balance sheet is well presented and some of the figures therein are surprising. The searcher for sensational matter will be disappointed; there are no revelations of preparatory orgies to hearten young volunteers to face easy death. A chapter containing last letters home by pilots is more revealing than heart-rending. The tone of some of these letters is more like what one would expect from a declining uncle contemplating bankruptcy than from a young man facing his inescapable end.

Thus the value of this work, which is a significant contribution to the history of air warfare, lies not so much in its excellent presentation of why, how, and with what effect the Kamikaze attacks were made, but rather in its revealing sketch of the Japanese Navy from admirals to ensigns in the last stages of a losing battle. An obvious omission is any mention of similar tactics by the Japanese Army or, for that matter, any account of what the Army and its Air Force was doing at the time.

The publisher is the United States Naval Institute, the translation is obviously good, and there are numerous excellent illustrations.

The Kola Run. By Vice-Admiral Sir Ian Campbell and Captain Donald Macintyre. (Muller.) 25s.

The Greatest Raid of All. By C. E. Lucas Phillips (Heinemann.) 18s.

Admiralty Brief. By Edward Terrell. (Harrop.) 21s.

It can be said, with little fear of contradiction, that the officers and men of the Royal and Merchant Navies who manned the escorts and the freighters which formed the convoys to and from North Russia built up a record of endurance, gallantry, and seaman-like skill that has very few parallels in the history of maritime war. In *The Kola Run* Admiral Campbell and Captain Macintyre, both naval officers of great distinction with a wide experience of convoy warfare, cover the whole story of the convoys from the sailing of the first to Russia in August, 1941, to the departure of the last one of all from the Kola Inlet at the end of May, 1945. And what a moving and splendid story it is; the long passage through the world's stormiest seas, hedged in by the ice barrier on one side and an enemy held coastline on the other, assailed by aircraft, U-boats, and surface warships. It called, day after day and night after night, for a vigilance and tension that could never be relaxed, and with the clear knowledge in every man's mind that if disaster should befall his ship there was little chance of survival in the bitter winds and icy seas. But in the face of it all there ever remained the unfaltering determination to get the convoys through.

The various actions with the enemy forces are described with the authority and special understanding to be expected from the authors, but it is to be regretted that in their eagerness to do full justice to the theme they occasionally tend to stray into the 'another ruthless redskin bit the dust' school of literature. The word 'grim' for instance is reiterated with almost tedious frequency on several successive pages, and when H.M.S. *Sheffield* during the Battle of the Barents Sea sinks the German destroyer *Friedrich Eckholt*, which not long before had sunk the minesweeper *Bramble*, she exclaims "dire vengeance for the little *Bramble's* traceless doom." None the less this is a notable book which must rank as an important contribution to the history of war at sea.

It was concern for the safety of convoys, the North Atlantic convoys, that led to the raid on St. Nazaire which is the subject of Mr. Lucas Phillips's book. The great Normandie lock in that port was the only one on the Atlantic seaboard of France capable of accommodating the giant battleship *Tirpitz*. By rendering it unusable the raiders, it can be fairly claimed, effectively prevented her employment against merchant shipping in the Atlantic as there remained no haven to which she could retire should she, during the course of a foray, sustain damage that demanded repair.

It was an audacious operation, precisely planned and superbly carried out against furious opposition, although the demolition work in the dockyard had to be done by only about half the Commando force carried up the Loire by the motor-craft of the Royal Navy's Coastal Forces and the old destroyer *Campbelltown*. The other half never got ashore from the many motor launches shattered and burnt during the course of the river battle. Only three of the boats got safely home out of the 18 that had set out on the expedition.

The *Campbelltown's* attack was brilliantly successful and the author provides a stirring account of how, steaming at 20 knots, with every German gun that would bear concentrated upon her, she rammed the massive caisson at the lock entrance with such accuracy and force that her bow crumpled back for a distance of 36 feet. Her allotted duty was fulfilled many hours later when the four and a half tons of high explosive concealed in her fore-castle blew up and burst the caisson asunder.

The Commandos, their work done and deprived of their means of escape by sea, tried to fight their way out of the town into open country, but exhausted by the strain of many hours of battle they were eventually rounded up and forced to surrender; all but five, who succeeded in reaching Spain.

Using both British and German records Mr. Phillips has produced in a tense and restrained narrative a worthy record of a magnificent enterprise.

Mr. Terrell's personal contributions to the second World War effort in the form of plastic armour, the rocket bomb, and smoke abatement devices in merchant ships were undoubtedly extremely valuable, but this account of their origins, development, and eventual adoption is marred by the somewhat self-satisfied and lengthy recitals of the manner in which all who ventured to oppose his ideas were first of all discomfited and then swept aside. If he had resisted the temptation to score off the honest doubters, the book while losing nothing of its interest and historical value would have been more pleasurable to read, for he writes fluently and has many entertaining stories to tell. In parenthesis, the claim on the book's dust jacket that plastic armour 'saved Britain's merchant fleet during the war' is probably a trifle exaggerated.

British Naval Aircraft, 1912-58. By Owen Thetford. (*Putnam.*) 50s.

This well produced book of reference follows Mr. Thetford's similar volume on the aircraft of the Royal Air Force. He is to be congratulated on compressing such a fund of information, covering nearly half a century, into so handy a book. Not only does it include technical data, photographs, and line drawings of every aircraft used by the Royal Navy since the dawn of serious military aviation, but short historical notes on the air squadrons to which the various aircraft were supplied and brief mention of the more important operations in which they took part are also added.

The author's introductory note in itself provides an excellent summary of the progress in naval aviation since its inception, although it contains some minor inaccuracies, as does the text. For example, the Royal Navy possessed only 17 air squadrons, comprising a total of 232 aircraft, and four air stations on the outbreak of the second World War; 'Naval Aviation,' that official but unattractive title for the Fleet Air Arm, was first brought into use in 1946, and not in 1939; it is now generally accepted that no enemy submarines were sunk by air attack alone in the first World War whereas mention is made in the book of U.B.12 having been destroyed by some de Havilland 4's in August, 1918; and the Grumman Goose amphibian, and not the Widgeon, was used for observer training and communication duties in the West Indies from 1943 to 1945.

The book concludes with three useful appendices and a rather inadequate index.

ARMY

The First and the Last. By Major J. D. P. Stirling. (*Art and Educational Publishers.*)

This is the story of the 4th/7th Dragoon Guards, 1939-1945, first published in 1946, compiled from regimental war diaries and personal narratives. It is said that, in 1918, the

Regiment's horses were the first across the Rhine; they were the first cavalry armoured unit to arrive in France in 1939; theirs were the first tanks ashore on D-Day and the first across the Seine in August. With the 51st Division, they were the last troops to be in action against the Germans.

The narrative, which is clear and concise, gives an excellent description of the Regiment's activities, actions, and reactions on service and at home. The author makes some good comments on various subjects, including the value of tradition. An unusual feature is the marginal notes giving dates, names of casualties, units and formations concerned, commanders, and other facts. The volume is illustrated and provided with sketch-maps.

In his introduction Lieutenant-General Horrocks makes the significant remark that "the 4th/7th Dragoon Guards were very popular with the Infantry." Lieutenant-General Carton de Wiart also contributes a foreword.

The Life of a Regiment, Volume IV. By Cyril Falls. (*Aberdeen, The University Press.*)

This volume of the history of The Gordon Highlanders covers the war years of 1914-1919 during which both Regular battalions, four Territorial, and three 'Kitchener' battalions served in France, except that the 2nd Battalion spent the last year of the war on the Italian front. The Regiment's casualties were exceptionally heavy, including over 1,000 officers.

The book is well arranged—not an easy task when dealing with so many battalions—and the narrative is clear in spite of the amount of detail included. In addition to providing an adequate background to the Regiment's activities, the author states the reasons for the action of the higher command in various situations. Furthermore, he has been successful in reviving the atmosphere of the period by excellent descriptions of conditions, of the reactions of all ranks, and of tactical methods.

The author has produced a work in every way worthy of the Regiment whose fine story it relates. The volume is provided with 21 clear sketch maps and a good index. The appendices contain an imposing list of honours and awards, including four Victoria Crosses.

Proud Heritage—The Story of the Highland Light Infantry—Volume I. By Lieutenant-Colonel L. B. Oatts. (*Nelson.*) 30s.

This volume of the history of the Highland Light Infantry, was published in 1952 and tells of the First Battalion—the old 71st—from its formation in 1777 until 1881. Here is a story of the Siege of Gibraltar; service in India, the Cape of Good Hope, and South America; the expedition to Walcheren; the Peninsular and Crimea campaigns, and other exploits. It is indeed a proud heritage.

Many Regimental historians assume that the reader is familiar with the general history of the times—an assumption which is often wrong and in many cases necessitates reference to other books. The author is not guilty of this: the book contains just the right amount of background, which includes in Chapter I—under the title 'Origins'—an excellent summary of conditions in the Highlands of Scotland before, and about the time of, the raising of the Regiment.

The book is written in a very attractive style, is well produced and, in addition to some 250 pages of text, contains five illustrations (four in colour), five maps, and a coloured chart showing the activities of the 71st.

Regimental Fire. By Brigadier R. F. Johnson. (*Published by the Regiment.*)

This book is concerned with the Honourable Artillery Company's service in the second World War in which the Infantry Battalion was turned into an O.C.T.U.—quite rightly from the broad point of view. But the Artillery, as well as providing numerous candidates for commissions, formed three horse artillery regiments as well as several heavy anti-aircraft batteries.

The 11th (H.A.C.) Regiment, R.H.A., fought in the Western Desert with the 1st Armoured Division from January, 1942, until the final battle outside Tunis. The 12th served with the 6th Armoured Division in Tunisia; and both regiments took part in the Italian campaign. The 13th landed in Normandy on 15th June, 1944, with the 11th Armoured Division, and finished the war at Lübeck. The anti-aircraft batteries served at home and in France.

The narrative, arranged in parts each dealing with one unit, is written in considerable detail with an adequate background, and includes a number of anecdotes and comments. Much emphasis is laid on the value of tradition; and the custom of honouring guests with 'Regimental Fire' is described in a glossary.

AIR

C.F.S. Birthplace of Air Power. By John W. R. Taylor. (*Putnam.*) 21s.

The Royal Air Force Central Flying School is unique and its status is appropriately recognized in the author's title. Biographies of persons and histories of institutions often fail through shortcomings of the subject or defects in treatment; this book does neither, and it is indeed fortunate that C.F.S. is so well presented in a factual, well balanced, and eminently readable book.

It is interesting to learn just how far C.F.S. has travelled since its inception at Upavon in 1912 when the syllabus covered such studies as formations of foreign armies (cavalry) and dismantling of aeroplanes. Likewise it is surprising to read that Major Hugh Trenchard was posted to Upavon because his superiors considered that a fairly quiet staff job would be ideal for him. There is also the account of a pupil who wrecked six aeroplanes in five days—a record which stands to this day in the oldest establishment in the R.A.F. still operating under its original name. As would be expected, an interesting flow of anecdote continues throughout the book, from box-kite to jet, but there is as one would hope a serious vein running throughout.

The author has, rightly, devoted considerable attention to the birth of what has become an almost world-wide method of training instructors introduced originally by Smith-Barry in the School of Special Flying at Gosport. He traces how the absorption of the system by C.F.S., with its traditions that it is the man who counts rather than the machine and that the solution of most flying problems can be determined only in the air, developed a method of instruction adequate for the successive challenges of early high speed flight, war expansion, and the higher and faster flying of jet aircraft.

This is a book which should not be missed by any serious student of aviation or any young officer who would like to learn just how crazy his staid and revered air marshals were in their younger days. It is indeed fortunate that C.F.S. should have so entertaining and conscientious a biographer, who clearly based his work on the best possible sources of information.

LIBRARIAN'S NOTES

A PICK FROM 1958

The best studies of future war, and by this I mean the art in its broadest sense, not the technique of the fighting Services, come again from America. *Armies and Men*, by Walter Millis, *Russia, the Atom and the West*, by George Kennan, and *Power and Diplomacy*, by Dean Acheson, perhaps head the list, but two others cannot be left out and their importance is likely to increase. These are *Soviet Strategy in the Nuclear Age*, by Raymond L. Garthoff, and *War and Peace in the Space Age*, by Lieut.-General James M. Gavin. The study of strategy is very earnestly pursued in the United States. It is to be hoped that the next few years will see some publications of importance coming from this side of the Atlantic.

Books on the second World War continue to flow, and as even the bad ones have a ready if brief sale we must expect the spate to continue for some years. In a class of excellence by themselves are the United Kingdom Official Histories, out of which we choose the first two volumes on the war against Japan. Every word deserves reading, but space does not allow more than a reminder of their existence. Professor S. E. Morison's *American Contributions to the Strategy of World War II* and Von Manstein's *Lost Victories* are attractive works by respectively a noted historian and a recognized strategist.

Of naval books two are of outstanding merit. *Victory at Sea*, by Lieut.-Commander P. K. Kemp, tells the student most of all he needs to know about the naval struggle of 1939-45 and tells it in a readable and attractive style. Commander M. G. Saunders edits *The Soviet Navy*, a full and up-to-date account, covering the present and probable future. This is a worthy companion to Liddell Hart's similar compilation on the Soviet Army.

Operation Sea Lion, by Ronald Wheatley, deals thoroughly with the invasion problem, but if current taste is any indication many will continue to read Peter Fleming's *Invasion 1940*, which came in 1957. From the western European front the best are Colonel Goutard's *The Battle of France*, General Urquhart's *Arnhem*, and R. W. Thompson's *The Battle of the Rhineland*. The eastern front has given us the unforgettable *Stalingrad*, by Heinz Schröter, and *The Forsaken Army*, by Heinrich Gerlach. From the western desert are *The "G" Patrol*, by Michael Crichton-Stuart, and *The Phantom Major*, by Virginia Cowles, both good war studies and well worth their place in any 1958 military list.

Three books dealing with the problem of leadership—and its struggle for existence in our curious age—are *Leadership in the 20th Century*, by L. F. Urwick, *The Organization Man*, by William H. Whyte, and the already notorious *Parkinson's Law*, by C. Northcote Parkinson. These three are not merely worthy of study. They should be conned over and brooded on in conjunction. They are closely related and the fact that in them military leadership is not the first issue makes them more interesting; military leadership in its higher manifestations can never be isolated.

Biographies usually head the popularity list and in 1958 two stood out. Their appeal seems likely to continue. They are *King George VI*, by J. W. Wheeler Bennett, and *Kitchener: Portrait of an Imperialist*, by Philip Magnus. Neither subject was an easy one, yet a fine study has emerged in each case. Little behind these two come *Alfred Lord Milner*, by Evelyn Wrench, *Michael Collins*, by Rex Taylor, *Field Marshal Lord Ligonier*, by Rex Whitworth, and *T. E. Lawrence*, by J. B. Villars, this last one of the most sober and fair accounts of a personality ever provocative of argument. In a category by itself is General Fuller's *The Generalship of Alexander the Great*, thought by some to be the finest work of this celebrated writer, a tribute indeed.

Nowadays, 'current affairs' smacks of examinations, a depressing connection for many excellent books. In our November issue our reviewer commented on Dr. Crowley's brilliant *Background to Current Affairs*, and here I can but echo his praise. Russia can be pleasantly tasted in John Gunther's *Inside Russia Today*, which will remain a fine

background for some years to come, and Boris Pasternak's *Dr. Zhivago*—and let no one despise novels in this connection—gives an impressive picture of the inside of Soviet life. Of the many books on the Middle East, Walter Z. Laqueur's *The Middle East in Transition* is probably the best and fullest. The Far East is portrayed in two books on Japan, *Japan and Her Destiny*, by Mamoru Shigemitsu, and *Japan between East and West*, produced by the Council of Foreign Relations. But the key point of world interest today is Communist China and *Flood Tide in China*, by C. P. Fitzgerald, deserves very careful reading. It is a good follow-up to his *Revolution in China*, published a few years ago. Lastly, the terrible problem of resurgent Africa, and for this there is the brilliant study by the Director of the Institute of Race Relations, Philip Mason, entitled *The Birth of a Dilemma*. In the history of the impact of white and black in Rhodesia he mirrors clearly one of the biggest questions of our time.

And now I hear a thousand voices saying "Good heavens, he's left out . . .!" Yes, I have; but you've heard enough about it already.

PRINCIPAL ADDITIONS TO THE LIBRARY

(*Books for Reference in the Library only.)

BIOGRAPHY AND MEMOIRS

- KING GEORGE VI : His Life and Reign. By J. W. Wheeler Bennett. (Macmillan, 1958.) 60s. Presented by the publishers.
- THE SHY PRINCESS. By David Duff. (Evans, 1958.) 30s.
- KITCHENER : Portrait of an Imperialist. By Philip Magnus. (John Murray, 1958.) 30s. Presented by the publishers. (See review in this JOURNAL.)
- THE MEMOIRS OF FIELD-MARSHAL THE VISCOUNT MONTGOMERY OF ALAMEIN, K.G. (Collins, 1958.) 35s. Presented by the publishers. (See review in this JOURNAL.)
- ILL-STARRED GENERAL : Braddock of the Coldstream Guards. By Lee McCardell. (University of Pittsburg Press, 1958.) 48s.
- THE STRANGE STORY OF DR. JAMES BARRY. By Isobel Rae. (Longmans, 1958.) 13s. 6d. Presented by the publishers.
- GORDON PASHA OF THE SUDAN. By Lieut.-Colonel the Hon. E. G. French, D.S.O. (MacLellan, 1958.) 21s.
- THE SULTAN : The Life of Abdul Hamid. By Joan Haslip. (Cassell, 1958.) 25s.
- THE ORDEAL OF WOODROW WILSON. By Herbert Hoover. (Museum Press, 1958.) 35s.
- SIR CHARLES DILKE. By Roy Jenkins. (Collins, 1958.) 25s.
- UNDER SIX REIGNS. By G. P. Gooch. (Longmans, 1958.) 25s.
- T. E. LAWRENCE. By J. B. Villars. (Sidgwick and Jackson, 1958.) 30s.
- FRONTIER DOCTOR. By Sir Henry Holland. (Hodder and Stoughton, 1958.) 25s. Presented by the publishers. (See review in this JOURNAL.)
- ALONG THE ROAD TO FROME. By Christopher Hollis. (Harrap, 1958.) 17s. 6d.
- VON RICHTOFEN AND THE FLYING CIRCUS. By H. J. Nowarra and K. S. Brown. (Harleyford Publications, Ltd., 1958.) 45s.
- NO COLOURS OR CREST. By Peter Kemp. (Cassell, 1958.) 18s. Presented by the publishers.
- ADVOCATES OF THE GOLDEN AGE. By Lewis Broad. (Long, 1958.) 21s.
- END OF A HATE. By Russell Braddon. (Cassell, 1958.) 15s.
- POWER AND FOLLY : The Story of the Caesars. By Ivar Lissner. (Cape, 1958.) 35s.

SECOND WORLD WAR

- HISTORY OF THE SECOND WORLD WAR : The War against Japan, Vol. II. (Official.) By Major-General S. Woodburn Kirby and others. (H.M.S.O., 1958.) 55s. Presented by the publishers. (See review in this JOURNAL.)
- FACTORIES AND PLANT. (Civil Official Histories.) By William Hornby. (H.M.S.O., 1958.) 37s. 6d. Presented by the publishers.
- ADMIRALTY BRIEF. By Edward Terrell, O.B.E., Q.C. (Harrap, 1958.) 21s. Presented by the publishers. (See review in this JOURNAL.)
- THE KOLA RUN. By Vice-Admiral Sir Ian Campbell and Captain Donald Macintyre. (Muller, 1958.) 25s. Presented by the publishers. (See review in this JOURNAL.)
- THE GREATEST RAID OF ALL. By C. E. Lucas Phillips. (Heinemann, 1958.) 18s. Presented by the publishers. (See review in this JOURNAL.)
- SINKING OF THE BISMARCK. By Will Berthold. (Longmans, 1958.) 16s.

- ONE MAN BAND. By Rear-Admiral Ben Bryant. (Kimber, 1958.) 25s.
- THE BATTLE OF FRANCE. By Colonel A. Goutard. (Muller, 1958.) 25s. (See review in this JOURNAL.)
- THE FORSAKEN ARMY. By Heinrich Gerlach. (Weidenfeld and Nicolson, 1958.) 18s.
- RETREAT FROM KOKODA. By Raymond Paull. (Heinemann, 1958.) 30s.
- PSYCHIATRY IN THE BRITISH ARMY IN THE SECOND WORLD WAR. By Robert H. Ahrenfeldt. (Routledge and Kegan Paul, 1958.) 35s. Presented by the publishers.
- THE ARMY AIR FORCES IN WORLD WAR II. Volume VII. Edited by W. F. Craven and J. L. Cate. (University of Chicago Press, 1958.) 64s.
- SEARCH AND RESCUE. By Robert Rodrigo. (Kimber, 1958.) 21s.
- UNEXPLODED BOMB. By Major A. B. Hartley. (Cassell, 1958.) 21s.
- DEATH BE NOT PROUD. By Elizabeth Nicholas. (Cresset Press, 1958.) 21s.
- THE GERMAN RESISTANCE. By Gerhard Ritter. (Allen and Unwin, 1958.) 35s.

NAVAL

- THE FLEET THAT HAD TO DIE. By Richard Hough. (Hamish Hamilton, 1958.) 18s. Presented by the publishers.
- BRITISH NAVAL AIRCRAFT: 1912-1958. By Owen Thetford. (Putnam, 1958.) 50s. Presented by the publishers. (See review in this JOURNAL.)
- "THE ADMIRALTY REGRETS . . ." By C. E. T. Warren and James Benson. (Harrap, 1958.) 17s. 6d. Presented by the publishers.
- NELSON'S LETTERS TO HIS WIFE. Edited by George F. B. Naish. (Navy Records Society, 1958.) 42s. Presented by the publishers. (See review in this JOURNAL.)
- THE VERNON PAPERS. Edited by B. McL. Ranft. (Navy Records Society, 1958.) Presented by the publishers. (See review in this JOURNAL.)
- MUTINY. By Frank Tilsley. (Eyre and Spottiswoode, 1958.) 15s.

ARMY

- *THE FIRST AND THE LAST: The Story of the 4th/7th Dragoon Guards, 1939-45. Compiled by Major J. D. P. Stirling. (Art and Educational Publishers, 1946.) Presented by the author. (See review in this JOURNAL.)
- THE TANKS. The History of the Royal Tank Regiment and its Predecessors. (Two volumes.) By Captain B. H. Liddell Hart. (Cassell, 1959.) 70s. Presented by the publishers.
- *THE ROYAL CORPS OF SIGNALS. A History of its Antecedents and Development. By Major-General R. F. H. Nalder, C.B., O.B.E. (Royal Signals Institution, 1958.) 30s. Presented by the publishers.
- *THE GORDON HIGHLANDERS IN THE FIRST WORLD WAR. The Life of a Regiment. Vol. IV. By Cyril Falls. (Aberdeen University Press, 1958.) 42s. Presented by the publishers. (See review in this JOURNAL.)
- *REGIMENTAL FIRE. The H.A.C. in World War II. By Brigadier R. F. Johnson. (Privately published, 1958.) Presented by the publishers. (See review in this JOURNAL.)
- *THE INDIAN ENGINEERS. 1939-47. By Lieut.-Colonel E. W. C. Sandes. (The Institute of Military Engineers, India, 1956.) Presented by Lieut.-General Sir Harold Williams, K.B.E., C.B., late Engineer-in-Chief, India.
- *READY FOR THE FRAY. The History of the Canadian Scottish Regiment (Princess Mary's), 1920-1955. By R. H. Roy. (Privately published, 1958.) Presented by the author.

AIR

*JANE'S ALL THE WORLD'S AIRCRAFT. 1958-59. Edited by Leonard Bridgeman. (Sampson Low, Marston and Co., 1958.) 105s. Presented by the publishers.

FLYING WITNESS. By Graham Wallace. (Putnam, 1958.) 25s.

CAMERA IN THE SKY. By Charles Sims. (Temple Press, 1958.) 25s.

COMMONWEALTH

THE COMMONWEALTH IN THE WORLD. By J. D. B. Miller. (Duckworth, 1958.) 25s. Presented by the publishers.

THE IMPERIAL IDEA AND ITS ENEMIES. By A. P. Thornton. (Macmillan, 1958.) 36s. Presented by the publishers.

PROBLEMS OF THE NEW COMMONWEALTH. By Sir Ivor Jennings. (Cambridge University Press, 1958.) 19s.

THE BIRTH OF A DILEMMA. By Philip Mason. (Oxford University Press, 1958.) 30s.

RUSSIA

THE TWILIGHT OF IMPERIAL RUSSIA. By Richard Charques. (Phoenix Press, 1958.) 25s.

THE RUSSIANS IN THE ARCTIC. By Terence Armstrong. (Methuen, 1958.) 22s. 6d.

THE MIDDLE EAST

EGYPT IN TRANSITION. By J. and S. Lacouture. (Methuen, 1958.) 35s.

EGYPT. By Tom Little. (Benn, 1958.) 30s.

THE THIRTEENTH POWER. By Richard Hilton. (Johnson, 1958.) 18s. Presented by the publishers.

MALTA. By Sacheverell Sitwell and T. A. Jones. (Batsford, 1958.) 30s.

IRAQ. By Stephen Longrigg and Frank Stoakes. (Benn, 1958.) 27s.

ADEN. By Sir Tom Hickinbotham. (Constable, 1958.) 21s. Presented by the publishers.

ASIA

THE CHANGING MAP OF ASIA. Edited by W. Gordon East and O. H. K. Spate. (Methuen, 1958.) 36s.

A PERSON FROM ENGLAND. By Fitzroy Maclean. (Cape, 1958.) 21s.

THE OXFORD HISTORY OF INDIA. Third Edn., edited by Philip Spear. (Oxford University Press, 1958.) 42s.

THE PATHANS. By Sir Olaf Caroe. (Macmillan, 1958.) 60s. Presented by the publishers. (See review in this JOURNAL.)

A SHORT WALK IN THE HINDU KUSH. By Eric Newby. (Secker and Warburg, 1958.) 25s. Presented by the publishers.

AHEAD LIES THE JUNGLE. By Suresh Vaidya. (Hale, 1958.) 18s.

ANGKOR. By Malcolm MacDonald. (Cape, 1958.) 42s.

THE OPIUM WAR THROUGH CHINESE EYES. By Arthur Waley. (Allen and Unwin, 1958.) 21s. Presented by the publishers. (See review in this JOURNAL.)

FLOOD TIDE IN CHINA. By C. P. Fitzgerald. (Cresset Press, 1958.) 25s.

MISCELLANEOUS

N.A.T.O. AND THE FUTURE OF EUROPE. By Ben T. Moore. (Harper and Bros. for the Council of Foreign Relations, 1958.) 36s.

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